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# Signature Forgery Detection System

Madan A S1, Mahadevakumar DS2, Kavyashree D G3

1.2 Dept of computer science <sup>3</sup>Professor, Dept of computer science

1.2.3 JSS College Arts, Commerce, Science (JSSCACS), Mysore, Karnataka, India

Abstract- The convenience and speed of electronic transactions have revolutionized document handling and company operations in an increasingly digital age. However, with this age of digital revolution came new difficulties, one of which was the vulnerability to forgeries of signatures. The act of forging someone else's signature without authorization, usually with the aim of misleading or defrauding, is known as signature forgery. Serious repercussions from such fraudulent

applying deep learning methods, specifically Convolutional Neural Networks (CNNs). By automating the signature verification procedure, the suggested method aims to improve document security and enable quick identification of faked

1.2 Objective: Obtain a large collection of digital signature photos that includes both forged and authentic signatures, then

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# CONVERTIONAL NEURAL NETWORKS FOR SIGNIFICATION: Examining Benchmark Data

In this research, a thorough investigation into the application of CNNs to signature verification is presented. The authors proved CNNs are better than conventional machine learning methods by conducting experiments on many public signature datasets. They also emphasized the significance of data augmentation and the ways in which various augmentation methods might affect the functionality of the model. All the same, this study was limited to CNNs and did not include feature extraction techniques like HOG.

# III. EXISTING SYSTEM

Current signature forgery detection methods frequently rely on basic feature-based approaches or manual eye inspection. Subjective human verification methods have the potential to produce mistakes and cause delays in the detection of forgeries. Feature-based approaches may not be as successful against sophisticated forging tactics and may not be able to capture complicated patterns. Consequently, the accuracy and efficiency required for real-world applications may not be achieved by present technologies to the needed degree.

## DISADVANTAGES OF EXISTING SYSTEM:

- Manual forecasting could not be entirely precise.
- Working with datasets that contain a lot of audio data degrades VM's performance, especially when target classes have overlapping traits.
- Data that is noisy and missing is sensitive

# IV. PROPOSED SYSTEM

With CNNs' remarkable performance in image processing tasks, the suggested signature image forgery detection system will make use of their power. A variety of digital signature images, including both real and fake signatures, will be used to train the system. The CNN-based model will be able to accurately discern between genuine and fraudulent signatures by picking up complex patterns and features.

# Benefits of the Submitted System:

- The height and stroke patterns of the signatures serve as the sole indicators of authenticity or forgery.
- A prediction system outperforms a manual one in accuracy.
- Even with a reduced quantity of data, accuracy can be attained.

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# VI. SYSTEM ARCHITECTURE DIAGRAM

The "Signature Forgery Detection using Histogram of Oriented Gradients (HOG) and Convolutional Neural Networks (CNN)" system requires multiple stages of design. The requirements determined during the feasibility study are effectively translated into a workable blueprint that developers can adhere to during the design process. This is an in-depth analysis of the design process: Design of System Architecture on a server-side Superior Architecture

The Client Interface serves as the platform for users to add signature photos. It should be web-based and easy to use; it might be developed with the help of frameworks like Angular or React.

 Server-side: CNN-based categorization, feature extraction, and image processing are handled by the backend system.
 Given Python's abundance of machine learning libraries, this server might be built with Flask or Django.

# VI. MODULES

## 1. Collection of Data:

This study's dataset, which includes 5123 modified photos and 7491 real images, was obtained from CASIA version 2.0.The 224 x 224 pixel size criterion applies to every image in the dataset.

# 2. Initial Data Processing:

Parts of the dataset are strategically divided, with roughly 50–90% going to training and the remaining portion being set aside for testing. These sets (training and testing) are further divided into two groups: "forged images" and "genuine images."

## 3. Information Modelling:

One of the most important parts of this research is the training data segments, which serve as inputs for the Convolutional Neural Network (CNN) algorithm.

•The method is evaluated on the test dataset to determine its effectiveness after the training phase.

# 4. Building the Model:

 After training, if the accuracy rate is high enough, the next step is to create a model file that contains all of the knowledge that was acquired during the hard training process.

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•One noteworthy development is the CNN's use of the VGG

16 architectural framework, which incorporates insightful information from the study of compression faults. Using the insights from Error Level Analysis (ELA) results, the main goal of this model is to distinguish between original and modified photos.

Signature forgery detection from Image

Signature forger

# VII. IMPLEMENTATION

Python is utilized in the project's implementation as a programming language that is both procedure- and object-oriented. Module templates can be created and instantiated as needed thanks to object-oriented programming, which provides a modular approach by separating data and function memory locations.

The dynamically typed language Python, which has built-in garbage collection, is used to carry out the project's implementation. The procedural, object-oriented, and functional programming paradigms are all supported by Python. Python is well known for being a "batteries included" language and has an extensive standard library. The use of machine learning techniques in this research is noteworthy.



Fig no 7.1 Hog Visualization



Fig.No 7.2: Screenshot of Home page

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Fig.No 7.3: About us page



Signature Forgery Detection



Fig.No 7.4: Screenshot of Prediction pag





Fig.No 7.5: Screenshot of Result pag

# VIII. CONCLUSION

The application of the Histogram of Oriented Gradients (HOG) technique proved to be beneficial in improving the precision and resilience of our signature forgery detection system. HOG is a crucial technique for extracting

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features from images and is particularly effective at identifying complex patterns and structures. HOG converts pixel information into a more abstract representation that is useful for identifying edge and texture elements. It is specifically designed to capture gradient orientations and magnitudes within local image regions. We used HOG as a pre-processing step in our signature forgery detection pipeline, which allowed us to fully utilise its potential. More research into adversarial training and resilient designs could improve the resilience of the system, strengthening it against adversarial attacks. The possibility of real-time detection is approaching, which would enable us to expand the capabilities of our system to validate signatures as they are being written.

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# PREDICTION OF CHILDREN BLOOD GROUP USING PARENTS BLOOD GROUP

# Madesh K N1, Prof. Vidyashankar2, Prof. Shilpa R V3

<sup>1</sup>UG Scholar(BCA),Dept. of computer science, JSS College Arts, Commerce, Science (JSSCACS), Mysore, Karnataka, India

<sup>2</sup>HOD & Professor, Dept. of computer science, JSS College Arts, Commerce, Science (JSSCACS), Mysore, Karnataka, India

<sup>3</sup>Professor, Dept. of computer science, JSS College Arts, Commerce, Science (JSSCACS), Mysore, Karnataka, India

Abstract - Abstract - Many medical applications, such as genetic counselling and transfusion therapy, depend on an understanding of the inheritance patterns of ABO blood groups. We looked at how well parents' blood types predict the possible blood group of their children in this study. We examined all potential pairings of alleles inherited from each parent using a computational method based on Punnett squares in order to predict the blood type of the child. The amalgamation of the parents' blood types offers significant information on the probable blood types of the progeny, as our findings indicate. We discovered that a child's probable blood types can vary depending on the blood group combinations of its parents; some combinations result in a smaller range of possible outcomes. Furthermore, the significance of taking into account genetic heterogeneity within populations and the possibility of uncommon blood group phenotypes is underscored by our findings. Our findings have consequences for clinical practice and advance our understanding of ABO blood group inheritance. They are especially relevant when discussing blood transfusions, organ transplantation, and genetic counselling. The accuracy of predicting a child's blood group based on their parents' blood types may be improved by additional study using bigger sample sizes and genetic markers.

Key Words: Blood Groupings Based on ABO, parental connection, ABO antigens, Rh antigens, Random Forest Classifier

# 1.INTRODUCTION

Knowing the blood group inheritance patterns is a key component in the complex field of healthcare. Predicting a child's blood group based on their parent's blood type is extremely important, since it can help with everything from safe blood transfusions to identifying genetic links through paternity testing. Our effort aims to provide insight into the genetic basis of blood type inheritance by creating a predictive model. Blood group inheritance is based on well-established genetic theories, most notably Mendelian inheritance. According to this theory, blood groups—which are divided into systems like Rh and ABO—are passed down in predictable ways from parents to their children. But

determining a child's precise blood type from their parents' blood types necessitates statistical analysis and a sophisticated grasp of genetic relationships. This is where our research enters the picture. We use cutting edge machine learning algorithms to accurately forecast outcomes and decipher the complexity of blood group inheritance. Repercussions from precise blood group prediction are extensive and extend across several healthcare sectors. To avoid negative responses during blood transfusions, it is crucial to make sure the blood types of the donor and the recipient are compatible. Healthcare practitioners can improve patient safety and maximise the effectiveness of transfusion treatments by anticipating a child's blood type with accuracy and taking pre-emptive measures to identify potential compatibility concerns.

# 1.1 Scope

Investigating the ability of parental blood groups to predict the probable blood group of their kids is the goal of this study. The study specifically intends to use computational techniques, including Punnett squares, to examine potential allele combinations inherited from each parent and forecast the blood group of the offspring. The study also intends to evaluate the variation in expected results depending on various parental blood group combinations and investigate the clinical practice implications of these results, encompassing genetic counseling, organ transplantation, and transfusion therapy.

# 1.2 Objective

Our project's goal is to create a reliable predictive model that can reliably identify a child's blood group from their parents' blood types. Our objective is to give medical professionals a trustworthy tool for predicting the possible blood group results for offspring by utilizing machine learning algorithms and genetic inheritance patterns. Planning blood transfusions, paternity tests, and other medical situations where understanding blood group inheritance is essential are intended to be made easier with the use of this predictive model. Our ultimate goal is to improve patient care and healthcare decision-making by

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offering a reliable and effective technique for determining a child's blood type.

# 2. LITERATURE SURVEY

Finding previous studies, research papers, and publications on the subject would be necessary for a literature review on the subject of predicting a child's blood group using parental blood groups. Here is a quick summary of what might be included in such a literature survey:

# Examining research articles:

Look for pertinent research articles on the subject of predicting a child's blood group based on their parents' blood group by searching academic databases (such as PubMed and Google Scholar). Seek publications that address inheritance patterns, the genetics of blood types, and computational techniques for predicting the blood groups of offspring.

# An Historical Perspective

Examine early research that established the groundwork for comprehending the genetics of ABO blood types as well as historical literature on blood group heredity.

# Hereditary and Genetic:

Examine the research on the genetics of ABO blood types, including Mendelian inheritance theory, population allele frequencies, and parent-to-child inheritance patterns of ABO blood types.

# · Authenticity and Precision:

Review the literature to determine the reliability and accuracy of forecasts based on parental blood types. Seek research papers that compare predictive algorithms and computer models to real-world data.

# Difficulties and Prospects:

Elucidate the obstacles and constraints associated with forecasting a child's blood group based on the blood groups of their parents, along with possible directions for further investigation to enhance precision and pragmatic applications.

Researchers can better comprehend the status of knowledge today, spot gaps in the literature, and gather information for the design and methods of their own studies by undertaking an extensive literature review.

Table -1: Determination of Blood Group

Genotype (DNA)	Blood Type
AO or AA	A blood type
AB	AB blood type
BO or BB	B blood type
00	O blood

ABO alleles are inherited by children from each biological parent. A mother with blood type O can only give birth to a child who carries an O allele. Given his blood type (AB),

# 3. METHODOLOGY:

3.1Information Gathering:Make sure the sample is diverse and covers a range of cultures and ethnicities by collecting information on the blood types of the parents and their children.

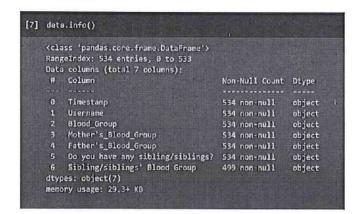


Fig3.1:collection blood data

# 3.2ComputerisedInstruments:

Analyze the inheritance patterns of ABO blood groups and forecast the probable blood types of offspring based on parental blood groups by using computational techniques like Punnett squares or probability calculations.

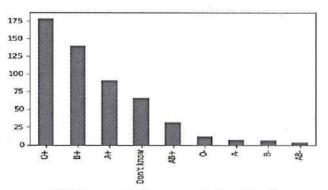


Fig3.2: graphical representation blood

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# 3.3MoralAspects:

Assure that ethical standards are followed, and get the necessary consent before using participant data for the study.

# 3.4Reporting and Documentation

Thoroughly record the research's methodology, findings, and conclusions. Write a research report or paper that complies with academic requirements and provides concise justificationsfortheresults.

# 3.5AssessingtheModel

Assess the performance measures of the trained model (s0accuracy, precision, recall, and using the testing data. Moreover, rigorous evaluation may be achieved by using cross-validation approaches.

# 3.6Prognosis

Based on the blood groups of their parents, apply the trained and assessed model to predict the blood type of their kids. In order to determine the blood group of the kid, you may design an intuitive user interface that allows users to enter the blood groups of their parents.

# 4. ALGORITHM

Step 1: Enter the blood types (such as A, B, AB, or O) of both parents.

**Step 2:** Based on their blood types, ascertain what potential alleles each parent might pass on to the child.

**Step 3:** Produce every conceivable pairing of all levels that the offspring might inherit from their parents.

**Step 4:** Determine the child's blood group by combining the available allele combinations.

**Step5:** The child's potential blood groups\* should be displayed

# 5. Schematic of architecture:

There are multiple steps involved in designing an architecture diagram that uses the blood groups of the parents to forecast the blood group of the child. This is a more basic diagram: The input data, which comprises the blood types of both parents, is represented by this layer. Module of Preprocessing The input data is preprocessed by this module to make sure it is in the right format for the prediction model. One-hot encoding or translating blood group types into numerical representations may be required for this. Model of Prediction The centre of the system is this. A machine learning model developed on a dataset of known parent-child blood group associations might be the source of the issue. Based on the blood groups of the parents, the

model may predict the child's blood group using algorithms like logistic regression, decision trees, or neural networks.

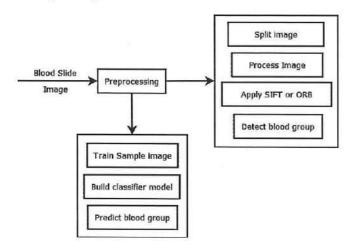


Fig5.1.Architecture Diagram

# **6.RESULT AND ANALYSIS**

When determining the blood type of a kid, 16 potential combinations must be taken into account, as there are 4 distinct mother blood types and 4 possible paternal blood types. All 16 of the potential combinations are displayed in the tables that follow. It is feasible to find the potential blood types of a parent's offspring if you are aware of their blood types.

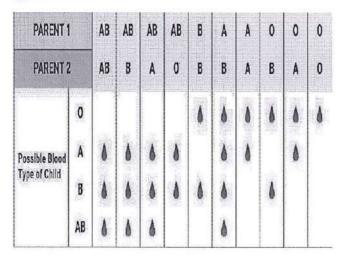


Fig6.1 -: Blood Group Typing

Create a confusion matrix to see how well your model is performing. The confusion matrix will provide the total distribution of forecasts as well as the number of accurate and inaccurate predictions for each blood type category (such as A, B, AB, and O).

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В	lood_Group	fother's_Blood_Group	Father's_Blood_Group
0	4	G	4
2	6	6	4
3	4	5	0
4	6	6	7
6	0	0	0

Fig 6.2:Pre-processed information

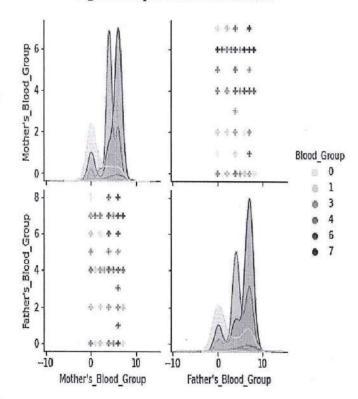


Fig 6.3: Distinguish between blood groups of mother and father

Pair plot illustrating the link between the blood groups of the mother and father. A person's codominant all levees determine their blood type. A chromosome's precise location in our DNA contains many forms of genetic information, one of which is called an allele. The human blood type, also referred to as IA, IB, and i, has three distinct alleles. For ease of communication, we can refer to these alleles as A, B, and O, respectively, for IA, IBBecause we each receive one blood type allele from our biological father and one from our biological mother, we each have two ABO blood type alleles. The genotype is a term used to describe the pair of alleles that make up our DNA. The human ABO system has six distinct genotypes in total because there are three distinct all levels.

			Father's Bloc	od Type		
		A	B.	AB	0	
Abe	٨	AOO	A, B, AB or O	A, B, or AB	AOO	9
I poo	В	A, B, AB Or O	BarO	A, B or AB	Baro	od Tvr
Mother's Blood Type	AB	A, B or AB	A, B or AB	A, B or AB	AcrB	Baby's Blood Type
Moth	0	٨٥٥	8 or O	AorB	0	Bab

Fig 6.4:Blood types of DNA

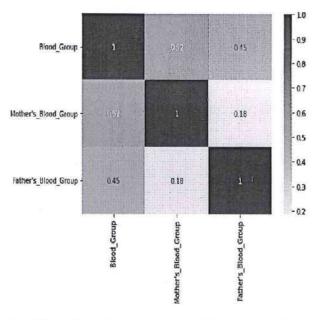


Fig 6.5:relationship between the blood group of the child and the mothers and fathers

# 7. CONCLUSIONS

With implications for clinical practice and genetic counselling, this research shows the potential of parental blood groups as a predictor of offspring blood type. We identified the potential blood types of children based on the blood groups of their parents by analyzing the inheritance patterns of ABO blood groups using computational techniques such as Punnett squares. In therapeutic settings, personalized assessment is crucial, as evidenced by our findings that show diversity in expected outcomes based on combinations of parental blood groups. We also emphasize the applicability of these predictions to other medical contexts, where knowledge of the prospective offspring's blood type can guide decisions and enhance patient outcomes, such as organ transplantation, genetic counselling, and blood transfusions.

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# Mr. VIDHYASHANKARA

Head of The Department Compute Headence

Dept. of Computer Science SS College of Arts, Commune & Science Signature with Date

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Ms. GAYATHRIUG216 24

Assistant Professor Dept. of Computer Science Mr. VIDHYASHANKARA S

Head of the partment

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USS College of Arts, Commerce & School
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JSS COLLEGE, MYSURU-25 Dept. of Computer Scienc Name	e of the Candidate: Sumanth. Aw
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Ms.DIVYA SHREE Assistant Professor Dept. of Computer So	EMS	Mr.VIDHYASHANKAR Head of the Department Computer Science Science
External Examiners  Name of the Examin	Dept. of Computer Science lers niversity Examinations	Opty Road, MYSURU-25
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Name of the Candidate: Rayi. Raghavendra

Register No.: U018E21S0105

Examination Centre: JSSCACS

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# DIAGNOSING BRAIN TUMORS AND LUNG-RELATED ABNORMALITIES

# ArunKumar S1, Prof. Vidyashankar2, Prof. Shilpa R V3

<sup>1</sup>UG Scholar(BCA),Dept. of computer science,JSS College Arts,Commerce,Science(JSSCACS),Mysore,Karnataka,India <sup>2</sup>HOD & Professor, Dept. of computer science,JSS College Arts,Commerce,Science(JSSCACS),Mysore,Karnataka,India <sup>3</sup>Professor, Dept. of computer science,JSS College Arts,Commerce,Science(JSSCACS),Mysore,Karnataka,India

Abstract - Making informed treatment decisions and forecasting patient outcomes depend on the precise identification and categorization of brain tumours. A standardised framework for classifying brain tumours based on histological and molecular criteria is provided by the 2016 World Health Organisation (WHO) Classification of Tumours of the Central Nervous System. The 2016 WHO classification has undergone significant modifications and adjustments, which are summarised below. The emphasis is on the significance of combining genetic and histopathological studies for accurate diagnosis and customised treatment plans. With over 85% of all cases, non-small cell lung cancer (NSCLC) is the most prevalent kind of lung cancer. Evidencebased suggestions for the diagnosis, staging, and treatment of non-small cell lung cancer (NSCLC) are provided by the National Comprehensive Cancer Network (NCCN) Clinical Practice Guidelines. An outline of the diagnostic evaluation of non-small cell lung cancer (NSCLC) is given in this abstract, together with information on biopsy methods, imaging examinations, and molecular testing. The necessity of thorough assessment in directing treatment options and enhancing patient outcomes is emphasised. These abstracts provide brief overviews of important subjects concerning the diagnosis of lung-related anomalies and brain tumours, offering insightful information about the present classification scheme. A multidisciplinary approach comprising clinical examination, medical imaging, and occasionally laboratory investigations is necessary for the diagnosis of lung-related disorders and brain tumours.

Key Words: Brain tumours, Innocent, Malevolent, Diagnosis, Therapy

# 1. INTRODUCTION

Finding lung-related anomalies and brain tumours early on is essential to enhancing patient outcomes and enabling prompt medical intervention. Accurate diagnosis and characterization of these disorders depend heavily on clinical evaluations and sophisticated imaging methods like MRIs and CT scans. Timely diagnosis increases the likelihood of effective management and recovery by allowing for quick treatment. The diagnostic approaches and technologies used to detect lung-related problems and brain tumours will be examined in this introduction, along with their importance in the medical field. The human brain is surrounded by cranial bones, meninges, and cerebrospinal fluid (CSF), which give protection and support. The brain, spinal cord, and

accompanying nerve cells make up the central nervous system (CNS), which controls the whole human body.

# 1.1 Scope

Prompt Identification Early detection of tumours and anomalies can lead to better results and higher survival rates since treatment choices are more effective at this point.CorrectDiagnosis Using cutting-edge imaging methods, clinical evaluations, and laboratory testing, we can precisely and thoroughly diagnose patients in order to create individualized treatment regimens. Features To assist in the selection and monitoring of the most suitable course of treatment, describe the type, size, location, and extent of lung-related abnormalities and brain tumours. Differential diagnosis To differentiate between benign and malignant tumours, together with other lung disorders; to minimize needless treatments and provide suitable care methods. Guidelines for Treatment To support individualized therapy methods and enhance patient outcomes by offering crucial information on tumor kind, stage, and molecular features that will affect treatment options.

# 1.2 Objective

Identifying and locating tumours or anomalies inside the brain and lungs by using sophisticated imaging modalities like MRI, CT, and PET scans. Conducting clinical evaluations to analyses symptoms and gauge the severity of the illness, such as neurological exams and pulmonary function testing. Obtaining tissue samples for histological examination by biopsy techniques, which helps identify the kind and extent of abnormalities or tumours. Combining genetic and molecular testing to inform individualized treatment plans, forecast prognoses, and improve diagnosis. Working in interdisciplinary teams of medical experts to evaluate results, create all-encompassing treatment programmes, and give patients the best care possible. Healthcare practitioners can guarantee prompt and accurate diagnosis and hence enhance patient outcomes and quality of life by accomplishingthesegoals.

# 2. LITERATURE SURVEY

Examining a broad range of academic articles, research papers, clinical guidelines, and review articles from respectable medical journals would be part of a literature analysis on the diagnosis of brain tumours and anomalies

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associated to the lung. A survey of this kind may address the following important subjects and areas: 1. Imaging Modalities: Assessment of the diagnostic effectiveness and precision of different imaging modalities, including MRIs, CT scans, PET scans, and X-rays, in the detection of anomalies connected to the lungs and brain tumours. The investigation of biomarkers and molecular testing techniques, such as genetic mutations, protein expression patterns, and other molecular signatures, that are utilised in the diagnosis of particular kinds of brain tumours and lung abnormalities is the second section. Examining tissue biopsy specimens for the purpose of classifying and grading brain tumours and lung abnormalities, histopathological analysis examines the morphological diagnostic characteristics and standards. 2. Differential Diagnosis: Looking into how to differentiate between benign and malignant tumours as well as diverse lung ailments such infections, autoimmune diseases, and inflammatory disorders, among other things. The third section of the article discusses the treatment implications of brain tumours and lung-related disorders, including how to choose a course of action, anticipate a patient's prognosis, and track their reaction to treatment. 3. Therapy Implications: This section discusses how brain tumor patients with lung-related anomalies may benefit from different treatments, how to forecast their prognosis, and how to track their therapy response. Emerging technology An examination of cutting-edge techniques and technology for diagnosis, including liquid biopsies, molecular imaging, and AI/ML algorithms, with the goal of enhancing patient outcomes.

4.Best Practices and Clinical Guidelines: Evidence-based clinical guidelines, expert recommendations, and consensus statements for the diagnosis and treatment of lung-related disorders and brain tumours are examined. Scientists and medical practitioners can learn a great deal about the stateof-the-art methods, difficulties, and potential future directions in the diagnosis of brain tumours and disorders related to the lungs by performing an extensive literature reviewcoveringthesetopics.

# 3. The reasons behind brain tumours:

It is impossible to pinpoint the exact aetiology of brain tumours, however a number of risk factors have been thoroughly researched. Among them are:

- 1. Radiation, both ionising and non-ionizing.
- 2. Family background;
- 3. Genetic and racial characteristics.
- 4. way of living
- 5. Nutrition.
- 6. Wine
- 7. Cigarette Use.
- 8. Dexpropran

# 3. METHODOLOGY:

- 1. Medical Assessment :A comprehensive clinical evaluation is carried out by healthcare professionals to determine symptoms, risk factors, and general health condition. This evaluation includes a review of medical history and a physical examination.
- 2. Studies on Imaging: Use cutting-edge imaging techniques to see and identify lesions or anomalies in the brain and lungs, such as MRIs, CT scans, PET scans, and X-rays. In order to detect possible tumours, masses, or other anomalies, radiologistsevaluatethepictures.
- 3. ExperimentsinLabs: To evaluate particular factors linked to lung and brain health, do laboratory testing, such as blood tests and biomarker assays. Assessment of tumour markers, tracking therapy response, and differential diagnosis.
- 4. Histological analysis and biopsies: When necessary, use tissue biopsy techniques to remove samples from anomalies or worrisome lesions so that they can be examined histologically. Under a microscope, pathologists assess the tissue samples to identify the kind, grade, and subtype of any abnormalitiesortumours.
- 5. Examining at the Molecular Level: Using biopsy samples, do molecular testing to evaluate genetic mutations, patterns of protein expression, and other molecular markers linked to certain tumor kinds or abnormalities in the lung. Prognosis and treatment decisions are guided by this information.
- 6. Collaboration Across Disciplines: Work together with diverse groups of medical specialists, including as radiologists, pathologists, pulmonologists, oncologists, and neurosurgeons, to evaluate diagnostic results, talk through treatment choices, and create thorough care plans.
- 4. Step by step to resolve diagnosing brain
- 4.1tumors and lung-related abnormalities

Making a brain tumor diagnosis:

Step1:clinical assessment :Commence with a comprehensive clinical examination that includes a neurological evaluation and a full medical history.

# Step2: Research on Imaging.

- 1.Magnetic Resonance Imaging, or MRI: Because of its excellent soft tissue contrast, this imaging technique is preferred for identifying brain tumours.
- 2.Computed Tomography, or CT: can be utilised in place of or in addition to MRI, particularly in critical circumstances.

Step3:Examination of Images: To find any anomalies that might point to a brain tumor, radiologists examine the imaging data.

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Tumor characteristics, including size, location, enhancing pattern, and surrounding edema, are assessed.

**Step4:Biopsy:** A biopsy may be carried out for a conclusive diagnosis or in situations where the imaging studies are not conclusive. To examine the tumor tissue under a microscope, a tiny sample must be removed.

# 4.2Making a Lung-Related Abnormality diagnosis:

**Step 1: Clinical Assessment:** Perform a comprehensive clinical evaluation that includes a physical examination, a review of medical history, and an assessment of respiratory symptoms.

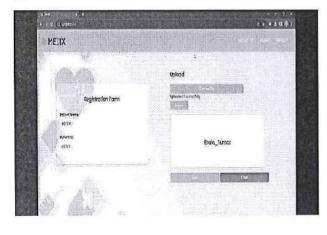
Step 2: Visual Research:1.X-ray of the chest: frequently the first imaging technique to assess problems in the lungs. It offers an overview quickly, yet it could be vague. 2. Computed Tomography (CT) scan: provides images with greater resolution and has a higher sensitivity for identifying abnormalities in the lungs, such as tumours, nodules, and other lesions.

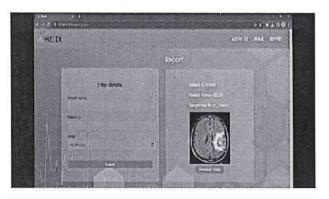
Step 3: Examining Images: In order to detect any anomalies, such as masses, nodules, infiltrates, or other pathological alterations in the lungs, radiologists analyses the imaging tests.

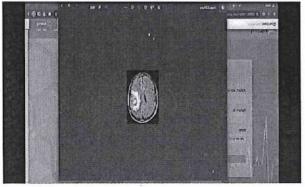
**Step4:Exams of the lungs (PFTs):**Evaluate lung health and assist in the diagnosis of diseases like restrictive or obstructive pulmonary disorders.

# 5.RESULT AND ANALYSIS

When determining the blood type of a kid, 16 potential combinations must be taken into account, as there are 4 distinct mother blood types and 4 possible paternal blood types. All 16 of the potential combinations are displayed in the tables that follow. It is feasible to find the potential blood types of a parent's offspring if you are aware of their blood types.







# 6.CONCLUSIONS

With implications for clinical practice and genetic counselling, this research shows the potential of parental blood groups as a predictor of offspring blood type. We identified the potential blood types of children based on the blood groups of their parents by analyzing the inheritance patterns of ABO blood groups using computational techniques such as Punnett squares. In therapeutic settings, personalized assessment is crucial, as evidenced by our findings that show diversity in expected outcomes based on combinations of parental blood groups. We also emphasize the applicability of these predictions to other medical contexts, where knowledge of the prospective offspring's blood type can guide decisions and enhance patient outcomes, such as organ transplantation, genetic counselling, and blood transfusions.

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Reg No: U01BE21S0032

Examination Centre: JSSCACS

Date Of Practical Examination:

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BN Road, Mysuru - 570025



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Ms. SHREYASHWINI

Assistant professor

Dept. of computer science

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Dept. of Computer Science

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Mr. VIDHYASHANKARA S

Head of the Department

Dept. of computer scients

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This is to certify that the project work entitled "Leaf Disease Detection Using Image Processing" carried out by GHANASHYAM M, bearing Register Number U01BE21S0009, has been successfully completed in the VI Semester as a part of the requirements for the award of the Bachelor of Computer Application degree by JSS College of Arts, Commerce, and Science (Autonomous), Mysuru, under the University of Mysore, during the academic year 2023-24. The project work has been reviewed and approved, meeting the academic standards and requirements prescribed for the final semester BCA program.

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### ReportonLeaf DiseaseDetectionUsingImage Processing

Ghanashyam M\*1, Sumanth B N\*2, Prof. Vidya Shankar \*3, Puneetha M P\*4

\*\*1UG Scholar(BCA),Dept. of computer science,JSS College Arts,Commerce,Science(JSSCACS),Mysore,Karnataka,India \*\*2UG Scholar(BCA),Dept. of computer science,JSS College Arts,Commerce,Science(JSSCACS),Mysore,Karnataka,India \*\*3 HOD and Professor,Dept. of computer science,JSS College Arts,Commerce,Science(JSSCACS),Mysore,Karnataka,India \*\*4 Asst.Professor,Dept. of computer science,JSS College Arts,Commerce,Science(JSSCACS),Mysore,Karnataka,India

### Abstract:

Farmers need automatic disease monitoring systems in order to improve crop development and yield. It takes a lot of time and experience, which is often expensive or unavailable, to perform manual monitoring, which is out of date. With an emphasis on leaves and fruits, this paper presents a novel method for quickly and accurately detecting plant diseases through the use of digital image processing. For disease detection and classification, the suggested approach combines a multi-SVM algorithm with a k-means clustering technique in MATLAB. About 70% of the people in India is dependent on agriculture, which is the backbone of the country's economy. Crop diseases are frequently the result of changes in the climate, such as intense rainfall and temperature swings. It takes a lot of time and money to diagnose severe illnesses using conventional methods, thus professional assistance is required. In order to detect plant diseases effectively and accurately, this research explores a contemporary method that uses image processing techniques. It focuses specifically on leaf infections.

Key Words: capturing images, preliminary processing, feature extraction categorizing, neural net.

### 1.INTRODUCTION

India is a country based mostly on agriculture. Agriculture accounts for 70% of India's GDP. Crops become infected as a result of climatic changes such as intense rainfall and sharp temperature swings. And those can be identified by defoliation, colour changes, spots on the leaf, and dryness of the leaf. The majority of people are unable to quickly and correctly recognise the illness. We need specialists who can diagnose the illness in order to accomplish it. However, this is a more costly and time-consuming procedure. The suggested project, which aims to detect leaf infections, uses image processing techniques because images are a valuable source of information and data for biological science. Digital image



processing and image analysis technology, which are based on advancements in micro electronics and computers, have numerous biological applications.

### 1.2Theproject'shistory

Disease identification heavily relies on image segmentation, which is the process of breaking a picture up into its component pieces. There are several approaches available, ranging from basic thresholding to sophisticated colour image segmentation. In order to find distinct features that would be difficult for computers to recognize without intelligent processing, this study uses evolutionary algorithms for colour image segmentation.

### 1.3 The Project's Goal

- The objective is to increase the accuracy of leaf disease detection.
- · Partitioning the leaf according to disease status
- The goal is to obtain the input of the processed leaf image.
- The K-Means clustering algorithm will be used to segment the image.
- Lastly, use an SVM classifier to determine the disease type and severity level that has affected
  the leaf.
- · combines and synthesizes prior understanding of a topic.
- Illustrates how you have applied other people's knowledge and how your research has generated new concepts.

### II. TECHNIQUES

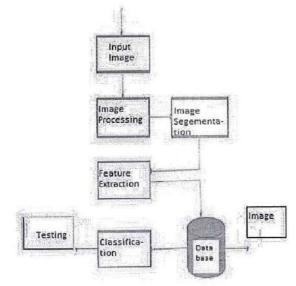


Fig -1: The suggested method's block diagram

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### • Image Input:

To identify illnesses, we employed digital leaf photos. Several internet sources provided the photos. We employed black spot, anthracnose, and rust—three prevalent rose diseases—in our study. JPEG photos of the diseases are displayed in Fig.1

### B.ImagePreparation:

The first step before feature extraction is image pre-processing chores. Image preprocessing processing consists of three steps: image conversion, image enhancement, and picture cropping. The image is turned to grayscale after being trimmed to remove leaf diseases. We applied a Laplacian filter to improve the image.

### III. A BASIC SYSTEM BLOCK DIAGRAM THAT INCLUDES A DESCRIPTION

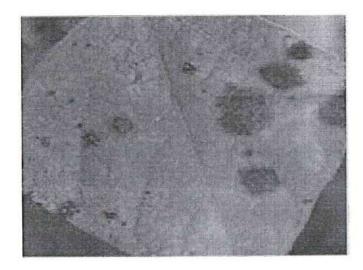
### • Inactive Stage:

An image analyzer is used to extract anomalous features from a huge number of defective photos. The classifier will then use these features that have been saved in a feature database.

### • Online Stage:

Diagnoses are made easier when an abnormal feature of a particular defective image is retrieved by an image analyzer and then categorized into a particular disorder by a classifier. An image analyzer's primary goal is to identify any aberrant symptoms of a colour picture defect that are represented by spots in terms of size, colour, and shape. The obtained defected colour image serves as the image analyzer's input, and the extracted characteristics of the defected image serve as the analyzer's output, as seen in the figure below.

### **EXPERIMENTAL SNAPSHOTS:**



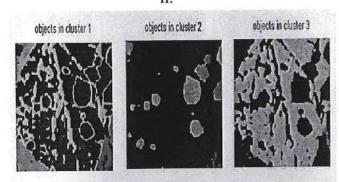
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### Fig(a):InputImage

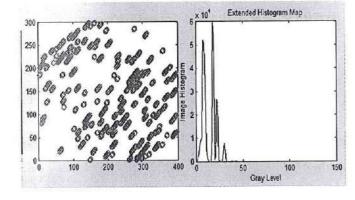


Fig(b):PreprocessingEnhancedImage

II.



Fig(c):SegmentationofImage



III. FIG(D):CLASSIFICATION OF IMAGE

### IV CONCLUSIONS

This study gives an overview of the many disease classification methods used to identify plant leaf diseases, along with an algorithm for picture segmentation that can be utilized for both automatic plant

leaf disease detection and classification in the future. The 10 species that the suggested algorithm is tested on include bananas, beans, jackfruit, lemons, mangoes, potatoes, tomatoes, and sapotas. Consequently, these plants' associated diseases were collected for identification. Optimizing the results required very little computing work, demonstrating the effectiveness of the suggested method in identifying and categorizing leaf illnesses. The ability to detect plant diseases at an early or preliminary stage is another benefit of employing this approach. In order to increase the identification rate during the artificial.

### V.FUTUREEXTENT

Using the technique described in the thesis, a soy bean expert system for farmers may be created that will enable early plant foliar infection detection, infection grading, and remote delivery of the proper remedy. We have attempted to draw attention to the issues surrounding the production of soybeans and the reasons behind low yield loss in developing nations such as India through our thesis work. Six foliar diseases that cause significant yield loss in soya plants have been identified: rust, bacterial blight, brown spot, downy mildew, frog eye, and sudden death syndrome. A fully automatic method has been proposed to identify and classify these diseases using various digital image processing techniques, as well as to classify the disease severity level using five classes.

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S College of Arts, Commerce & Science

JSS COLLEGE, MYSURU-25
Dept. of Computer Science
University Examination:

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Signature of Samuel

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Name of the Candidate: SACHIN M

Reg no:U01BE21S0010

**Examination Centre: JSS CACS** 

Date of Practical Examination:

(Autonomous)

BN Road, Mysore -570 025



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Dept. of Computer Science
University Examinations

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1) Hercer bijing

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Reg no:U01BE21S0002

**Examination Centre: JSS CACS** 

Date of Practical Examination:

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Meethy 01/07/24.

Ms.Neethu K N

**Assistant Professor** 

**Dept.of Computer Science** 

External viva-voce

Name of the Examiners
Dept. of Computer Science.

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Signature

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Mr. VIDHYASHANKAR S

Head of The Department ience

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An Autonomous college Affiliated to university of Mysore Re-Accredited By NACC with 'A' Grade, Ooty Road, Mysore-570025



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Meethy 01/04/24

Ms.Neethu K N

**Assistant Professor** 

**Dept.of Computer Science** 

External viva-voce

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Mr.VIDHYASHANKAR S

Head of The Department
Dept. of Computer Science
Computer Science & Science
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Ooty Road, MYSURU-25

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College of Arts, Computer & Science

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Dept. of Computer Science
University Examinations

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Name Of the Candidate: Rifa Huseini

Reg No: U01BE21S0004

**Examination Centre: JSSCACS** 

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MYSURU - 570 025

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Ooty Road, Mysore-570025



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Ms.NEETHU K N

**Assistant Professor** 

**Dept.of Computer Science** 

Dept. of Computer Science

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Name Of the Candidate: Umme Habeeba

Reg No: U01BE21S0012

**Examination Centre: JSSCACS** 

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Dept. of Computer Science

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JSS COLLEGE, MYSURU-25

Depr. of Computer Science Name of the Candidate: SHARATH M

University Examinations

Regno: U01BE21S0040

**Examination Centre: JSS CACS** 

1) Saturb turel. Mate of Practical Examination: 06/07/2024

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BN Road, Mysuru - 570025



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Octy Road, MYSURI 25

 Name of the Candidate: RAHUL G R

Reg no: U01BE21S0044

Examination Centre: JSS CACS

Date of Practical Examination:



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College of Arts, Commerce & Science
Ooty Road, MYSURU-25

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Dept. of Computer Science

University Examinations

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Reg no: U01BE21S0041

Examination Centre: JSS CACS

Date of Practical Examination:

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VALUED

Reg no: U018 E21800 39

Examination center: J'SSCACS

Date of Practical exam: 06/0+/2024



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Dept. of Computer Science

\*\*College of Arts, Commerce & Science

Ooty Road, MYSURU-25

Name of candidate: Rahul broudla .5

Reg no: 001882156045
Examination center:

Date of Practical exam:

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BN Road, Mysuru -570025



### **CERTIFICATE**

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Dept. of Computer Science College of Arts, Commerce & Science Ooty Road, MYSURU-25

Name of candidate: Pahul hourda.s Reg no: U01BE21S0045

Examination center:

Date of Practical exam:

(Autonomous)

BN Road, Mysuru - 570025



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Name of the Candidate: Madhusudhan P

Reg no:U01BE21S0073

Examination Centre: JSS CACS

Date of Practical Examination:

(Autonomous)

BN Road, Mysuru - 570025



### CERTIFICATE

This is to certify that the project work entitled "Online Temple Management System" carried out by Madhusudhan P bearing register number U01BE21S0073 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

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Dept. of Computer Science as College of Arts, Commerce & Science Doty Road, MYSURU-25

Name of the Candidate: Madhusudhan P

Reg no:U01BE21S0073

Examination Centre: JSS CACS

Date of Practical Examination:

ANUDANI

#### JSS COLLEGE OF ARTS COMMERCE AND SCIENCE

(Autonomous)

Ooty Road, Mysuru - 570025



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This is to certify that the project work entitled "INVESTIGATION THE POTENTIAL OF HAND DRAWN SPIRAL IMAGES FOR PARKINSON'S DISEASE DETECTION" carried out by Abhishek C S[U01BE21S0095] and Prajwal A J [U01BE21S0085] has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

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Dept. of Computer Science

155 College of Arts, Commerce & Science
Ooty Road, MYSURU-25

	Name of the Candidate: Paragood, AJ
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signature of Expenses	
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#### Pharmacy ManagementSystem

# JSS COLLEGE OF ARTS, COMMERCE & SCIENCE

(Autonomous) BN Road, Mysuru-570 025



#### CERTIFICATE

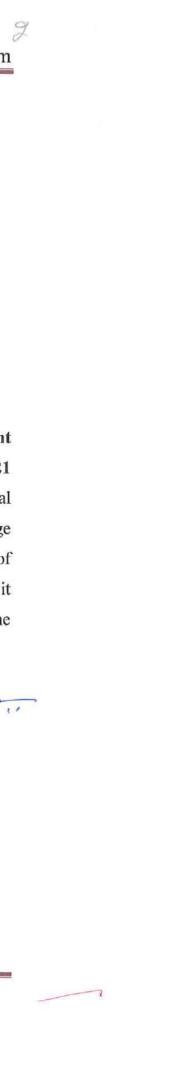
This is to certify that the Project work entitled "Pharmacy Management System" carried out by Sachin R bearing Register Number U01BE21S0021 has successfully completed the project work in VI Semester by partial fulfillment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and Science (Autonomous) Mysuru Under University of Mysore, during the Academic year 2023-24. The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA.

Signature of the Guide JSS COLLEGE, MYSURU-25 Dept. of Computer Science Name of the Candidate: University Examinations.

Examination Centre: .....

Date of Practical Examination: .06(07/2024

JSSCACS DEPT OF CS



(Autonomous)

Ooty Road, Mysuru - 570025



#### **CERTIFICATE**

This is to certify that the project work entitled "CITY BUS MANAGEMENT SYSTEM" carried out by Nishanth Patel M.B bearing register number U01BE21S0020 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

Signature of the HOD

Name of the Candidate: Nishanth palel mis
Reg No. UUI BE2150020
Examination Centre:
Date of Practical Examination:



(Autonomous)

Ooty Road, Mysuru - 570025



#### **CERTIFICATE**

This is to certify that the project work entitled "Web content management system" carried out by Prathap B bearing register number U01BE21S0094 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

Signature of the HOD

Dept. of Computer Science
SS College of Arts, Commerce & Science
SS College of Arts, Commerce & Science

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VALUED	Reg No. UOLBESI SOO94
Signature of Examiners	Examination Centre:
1)	Date of Practical Examination:
2) 1000	



(Autonomous)

Ooty Road, Mysuru - 570025



#### CERTIFICATE

This is to certify that the project work entitled "CITY BUS MANAGEMENT SYSTEM" carried out by VINOD G bearing register number U01BE21S0067 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

Signature of the HOD

Dept. of Computer Science

S College of Arts, Commerce & Science
Ooty Road, MYSURU.25

1	JSS COLLEGE, MYSURU-25  ppt. of Computer Science
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University Examinations

VALUED

Signature of Examinets

2) NS.M

Name of the Candidate: VINOD. G

Reg No. 401BE2150067

Examination Centre: JSS CACS

Date of Practical Examination: 09 3 3 13 1

NP

#### JSS COLLEGE OF ARTS, COMMERCE & SCIENCE

(Autonomous)

BN Road, Mysuru-570 025



#### **CERTIFICATE**

This is to certify that the project work entitled "Leaf Disease Detection Using Image Processing" carried out by SUMANTH BN, bearing Register Number U01BE21S0116, has been successfully completed in the VI Semester as a part of the requirements for the award of the Bachelor of Computer Application degree by JSS College of Arts, Commerce, and Science (Autonomous), Mysuru, under the University of Mysore, during the academic year 2023-24. The project work has been reviewed and approved, meeting the academic standards and requirements prescribed for the final semester BCA program.

Signature of the Guide

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JSS College of Arts, Commerce & Science
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#### DEPARTMENT OF COMPUTER SCIENCE



#### **CERTIFICATE**

This is certify that project work entitled "PLACEMENT CELL APPLICATION" carried out by **DEEKSHITHA** M bearing Register Number— **U01BE21S0079** satisfactorily completed the project work in VI Sémester by partial fulfilment for the award of the degree of **Bachelor of Computer Application** by JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) MYSURU during the academic year 2022-2024.

Signature of the Guide

Signature of the HOD

Dept. of Computer Science

Date of the Examination:

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	Name & Signature	of Examiners
1	JSS COLLEGE, MYSURU-25 Dept. of Computer Science	
1.	University Examinations	
2.	Signature of Type 1	
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#### 2023-2024

#### JSS COLLEGE OF ARTS, COMMERCE & SCIENCE

An Autonomous college Affiliated to university of Mysore Re-

Accredited By NACC with 'A' Grade,

Ooty Road, Mysore-570025



#### **CERTIFICATE**

This is to certify that TEJAS M, bearing Register Number U01BE21S0080 has successfully completed the project work entitled "CAR MANUFACTURING AND SALES" and submitted the report in partial fulfillment of the award of VI Semester Bachelors in Computer Applications by JSS college of Arts, Commerce and Science Mysore, during the academic year 2024. The work has been approved as it satisfies the Academic requirement in respect of project work prescribed for the VI semester BCA.

Signature of the Guide

Signature of HOD Dept. of Computer Science

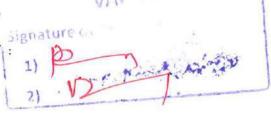
ISS College of Arts, Commerce & Science Ooty Road, MYSURU-25

Date of examination:

JSS COLLEGE, MYSURU-25 Dept. of Computer Science Iniversity Examinations

**VALUED** 

Name and Signature of examiner





SRV

# JSS Mahavidyapeetha JSS COLLEGE OF ARTS COMMERCE AND SCIENCE

(Autonomous)

BN Road, Mysuru - 570025



#### **CERTIFICATE**

This is to certify that the project work entitled "Mobile Application For Evaluation" carried out by H S SRUSHTI bearing register number U01BE21S0379 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

\$ 5/7/24

Signature of the Guide

Signature of the HOD

JSS COLLEGE, MYSURU-25
Dept. of Computer Science
University Examination

V/A!

Signatur

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2)

Name of the Candidate: H S SRUSHTI

Reg no: U01BE21S0379

Examination Centre: JSSCACS

Date of Practical Examination:



(Autonomous) BN Road, Mysuru-570 025



#### CERTIFICATE

This is to certify that the Project work entitled "PERSONAL TOURISM AND TRAVEL MANAGEMENT SYSTEM" carried out by Pallavi L B bearing Register Number U01BE21S0381 successfully completed the project work in VI Semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and Science (Autonomous) Mysuru Under University of Mysore, during the Academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA.

Signature of the Guide

Signature of the HOD

Name of the Candidate:-PALLAVI L B

Reg No:- U01BE21S0381

**Examination Centre:-JSSCACS** 

Date of Practical Examination:-

JSS COLLEGE, MYSURU-25 Dept. of Computer Science
University Examination
VALUED
Signature C.
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2) 0

(Autonomous) BN Road, Mysuru-570 025



#### CERTIFICATE

This is to certify that the Project work entitled "PERSONAL TOURISM AND TRAVEL MANAGEMENT SYSTEM" carried out by YASHASWINI T Y bearing Register Number U01BE21S0381 successfully completed the project work in VI Semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and Science (Autonomous) Mysuru Under University of Mysore, during the Academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA.

Signature of the Guide

Loidyna hus

Signature of the HOD Dept. of Computer Science

JSS College of Arts, Commerce & Salanes.

Octy Read, MYSURU-25

University Examination:

Signature

1) fe

Name Of The Candidate:-Yashaswini T Y

Reg No:- U01BE21S0083

**Examination Centre:**-JSSCACS

Date Of Practical Examination:-



OOTY ROAD, MYSURU-570025



#### CERTIFICATE

ACCOMMODATION SYSTEM" is a bonfire work carried out by VARUN B [JUA20075], student of 6thsemester, BCA, in partial fulfilment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysore during the academic year 2023-2024. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

H ceese 9/7/24 Signature of the Guide

Signature of the HOD

Dept. of Computer Science

College of Arts, Communic & Science

Name of the Candidate Vovcun B

Reg No. 50820075

Examination Centre. 500 college

Date of Practical Examination. 9 [9/2074.

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#### (Autonomous)

BN Road, Mysuru - 570025



#### CERTIFICATE

This is to certify that the project work entitled "STUDENT INFORMATION AND LIVE TRACKING" carried out by ABHILASH S K bearing register number U01BE21S0084 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

JSS COLLEGE, MYSURU-25
Dept. of Computer Science
University Examinations

1)

Signature of the HOD

Dept. of Computer Science

Name of the Candidate: ABHILASH S K

Reg no: U01BE21S0084

**Examination Centre: JSSCACS** 

Date of Practical Examination: 09-0ず-20分

(Autonomous)

BN Road, Mysuru - 570025



#### CERTIFICATE

This is to certify that the project work entitled "STUDENT INFORMATION AND LIVE TRACKING" carried out by H K RAVI SUTHA bearing register number U01BE21S0064 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

Signature of the HOD

Dept. of Computer Science

Allege of Arts, Commerce & Science

Name of the Candidate: H K RAVI SUTHA

Reg no: U01BE21S0064

**Examination Centre: JSSCACS** 

Date of Practical Examination:



#### 2023-2024

# JSS COLLEGE OF ARTS, COMMERCE & SCIENCE

An Autonomous college Affiliated to university of Mysore Re-

Accredited By NACC with 'A' Grade,

Ooty Road, Mysore-570025



#### **CERTIFICATE**

This is to certify that RAHUL E, bearing Register Number U01BE21S0060 has successfully completed the project work entitled "CAR MANUFACTURING AND SALES" and submitted the report in partial fulfillment of the award of VI Semester Bachelors in Computer Applications by JSS college of Arts, Commerce and Science Mysore, during the academic year 2024. The work has been approved as it satisfies the Academic requirement in respect of project work prescribed for the VI semester BCA.

Signature of the Guide

Signature of HOD

155 College of Arts, Commerce & Science
Octy Report MYSURU-25

Date of examination:

VALUED

Name and Signature of examiner:

JSS COLLEGE, MYSURU-25
Dept. of Computer Science
University Examinations
VALUED
Signature of Examiners

1)

(Autonomous)

BN Road, Mysuru - 570025



#### **CERTIFICATE**

This is to certify that the project work entitled "E-POST OFFICE" carried out by Mahantesh K R bearing register number U01BE21S0027 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

JSS COLLEGE, MYSURU-25
Dept. of Computer Science
Jniversity Examinations

Signature of the HOD

JSS College of Arts, Commerce & Science
Ootv Road, MYSURU-25

Name Of the Candidate: Mahantesh K R Reg No: U01BE21S0027 Examination Centre: JSSCACS Date of Practical Examination:

An Autonomous college, Affiliated to University of Mysore
Ooty road, Mysore-570025



#### **CERTIFICATE**

This is to certify that the Project work entitled "ONLINE BIRTH CERTIFICATE SYSTEM" is a Bonafede work carried out by ABDUL SUHAIL(U01BE21S0086) of 6<sup>th</sup> semester, BCA, in partial fulfilment for theaward of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2022-2023. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

MS. ROOPA
Assistant Professor

Dept. of Computer Science

External Viva-Wore

1) Dept. of Computer Science University Examinations  Signature  1)	
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Signatur (O)	
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Mr. VIDHYASHANKARA S

Head of The Department (E)

Computer Science & Science Science Computer Science Scienc

(Autonomous) BN Road, Mysure-570 025



#### **CERTIFICATE**

This is to certify that the project work entitled "PREDICTING SOCIO-ECONOMIC STATUS FROM SATELLITE IMAGERY USING ML" carried out by Prashanth Kumar KN, bearing Register Number U01BE21S0115, has been successfully completed in the VI Semester as a part of the requirements for the award of the Bachelor of Computer Application degree by JSS College of Arts, Commerce, and Science (Autonomous), Mysuru, under the University of Mysore, during the academic year 2023-24. The project work has been reviewed and approved, meeting the academic standards and requirements prescribed for the final semester BCA program.

Signature of the Guide

Signature of the HOD

Dept. of Computer Science

Reg No.: UOIBE2150115

Examination Centre: .....

Date of Practical Examination: .....

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(Autonomous) BN Road, Mysore – 570 025



#### **CERTIFICATE**

This is to certify that the Project work entitled "END TI END CRICKET DATA ANALYTICS" is a Bonafede work carried out by ADARSHA KALASA C S [UO1BE21S0117] student of 6thsemester, BCA, in partial fulfillment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysore during the academic year 2022-2023. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

Signature of the Guide

Signature of HOD

Dept. of Computer Science

Science & Science

Date of examination: 10

VALUED

Name and Signature of examiner JSS COLLEGE, MYSURU-25 T Dept. of Computer Science

(Autonomous) OOTY ROAD, MYSURU – 570 025



#### **CERTIFICATE**

This is to certify that project work entitled "College Enquiry Chatbot" carried out by PUNYASHREE bearing register number U01BE21S0061 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA.

Signature of the Guide

Dept of Compared & Science

S College of Arts, Commerce & Science

Onty Read, MYSURU-25

Date of the Examination

Name & Signature of Examiners y SURU-25

2.

University Examination!

Sign (tur) A simon of

Name of the candidate: Purposhree

Reg no : U01BE2150061

Examination Centre:

Date of Examination:



(Autonomous)

BN Road, Mysuru - 570025



#### CERTIFICATE

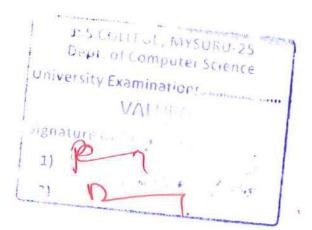
This is to certify that project work entitled "Automatic MCQ question paper generator" carried out by PRASHANTH M bearing register number U01BE21S0114 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

Signature of the HOD

Dept. of Computer Science

College of Arts, Commerce & Science

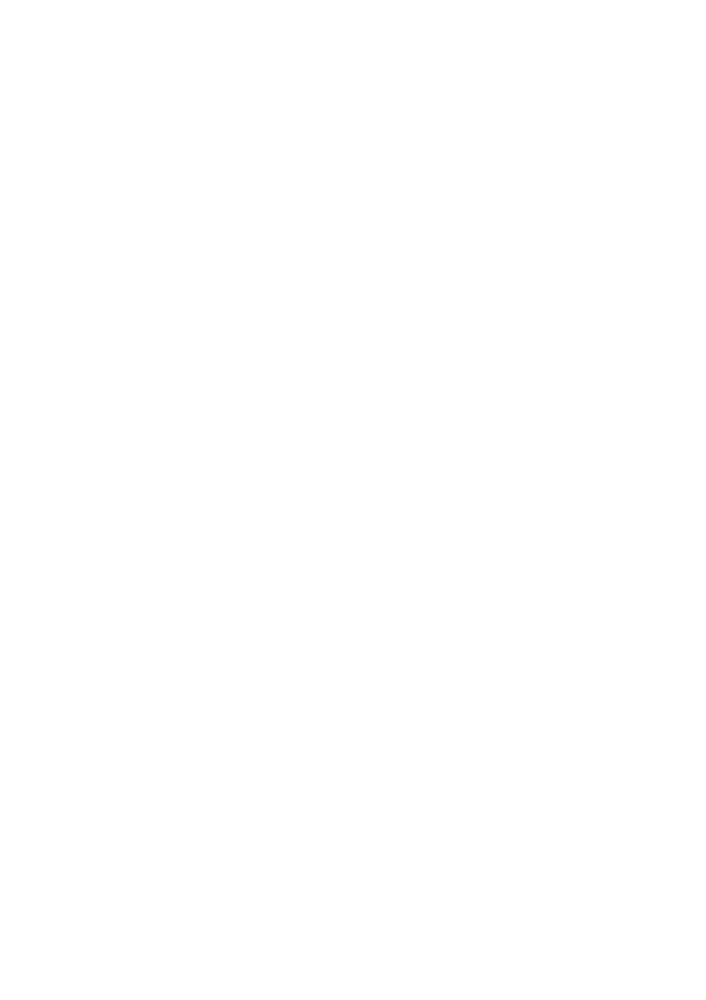


Name of the Candidate: PRASHANTH M

Reg no: UOIBERISO114

**Examination Centre:** 

Date of Practical Examination: 09 | 7 | 20 24



(Autonomous) OOTY ROAD, MYSURU – 570 025

#### DEPARTMENT OF COMPUTER SCIENCE



#### **CERTIFICATE**

This is certify that project work entitled "AUTOMATIC VEHICLE NUMBER PLATE RECOGNITION" carried out by AKASH HP, bearing Register Number – U01BE21s0410, satisfactorily completed the project work in VI Semester by partial fulfilment for the award of the degree of Bachelor of Computer Application by JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) MYSURU during the academic year 2023-2024.

Signature of the Guide

Signature of the HOD

Da	te of the Examination:
1.	Dept. of Computer Science Signature of Examiners University Examinations
, i	Signature (1) 2) 0

# JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) OOTY ROAD, MYSURU – 570 025

#### DEPARTMENT OF COMPUTER SCIENCE



#### **CERTIFICATE**

This is certify that project work entitled "AUTOMATIC VECHICLE NUMBER PLATE RECOGNITION" carried out by NAGENDRA N, bearing Register Number – U018E21S0059, satisfactorily completed the project work in VI Semester by partial fulfilment for the award of the degree of Bachelor of Computer Application by JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) MYSURU during the academic year 2023-2024.

Signature of the Guide

Signature of the HOD

Date of the Examination:

JSS COLLEGE, MYSURU-25 VALUED

Dept. of Computer Science
Name & Signature of Examiners

VALUED

Signature

1)



(Autonomous) OOTY ROAD, MYSURU – 570 025

# DEPARTMENT OF COMPUTER SCIENCE



#### CERTIFICATE

This is certify that project work entitled "DETECTION AND RECOGNITION OF NUMBER PLATES AND HELMET" carried out by NAGENDRA S, bearing Register Number – U01BE21S0299, satisfactorily completed the project work in VI Semester by partial fulfilment for the award of the degree of Bachelor of Computer Application by JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) MYSURU during the academic year 2023-2024.

Signature of the Guide

Signature of the HOD

	VALUED	
1. 2.	Dept. of Computer Science University Examinations	
	Signature of the state of the s	



An Autonomous college, Affiliated to University of Mysore

Ooty road, Mysore-570025



#### CERTIFICATE

This is to certify that the Project work entitled "COMPUTER SYSTEM CONTROLLING THROUGH NETWORKING" is a Bonafede work carried out by RAKSHITHA Y(U01BE21S0053) and POOJA K(U01BE21S0093) student of 6thsemester, BCA, in partial fulfilment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2022-2023. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

Lya Shre H.T

Ms.JAYASHREE H J

Assistant Professor Dept. of Computer Science

Dept. of Computer Science	
External Viva-Voce MYSURU-25	
Name of the Examiners Science	
University Examination	
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2. Signature groups 6) 7/29	1
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a Bonafede work carried out by  K(U01BE21S0093) student of  Index of the degree in Bachelor of  Mysuru during the academic year  corrections indicated for the internal  Inted in the department library. The  ments in respect of project work
ments in respect of project work
Mr. VIDH X SHOWKARA  Head of the Department  Somputer Science 25

An Autonomous college, Affiliated to University of Mysore

Ooty road, Mysore-570025



#### **CERTIFICATE**

This is to certify that the Project work entitled "COMPUTER SYSTEM CONTROLLING THROUGH NETWORKING" is a Bonafede work carried out by POOJA K(U01BE21S0093) and RAKSHITHA Y(U01BE21S0053) student of 6thsemester, BCA, in partial fulfilment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2022-2023. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

ms.JAYASHREE H J

Assistant Professor
Dept. of Computer Science

External Viva-Voce
Name of the Examiners

VALUED

1. Signature of Examiners



(Autonomous)

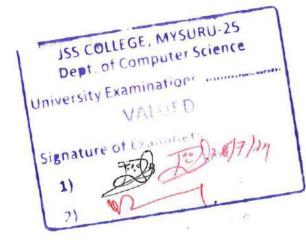
BN Road, Mysuru - 570025



#### CERTIFICATE

This is to certify that the project work entitled "Advanced Athlete Management System" carried out by Mohammed Mueez Ahmed bearing register number U01BE21S0050 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Sushma . B Signature of the Guide Designature of the HOD



Name Of the Candidate: Mohammed Mueez Ahmed

Reg No: U01BE21S0050

**Examination Centre: JSSCACS** 

Date Of Practical Examination:

(Autonomous)

BN Road, Mysuru - 570025



#### CERTIFICATE

This is to certify that the project work entitled "Enterprise Resource Planning" carried out by Muhammed Arshan Shariff bearing register number U01BE21S0111 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

Signature of the Holonet

JSS COLLEGE, MYSURU-25 Dept. of Computer Science

University Examinations

Name of the Candidate: MUHAMMED ARSHAN SHARIFF

Signature

Reg nd: U01BE21S0111

1)

**Examination Centre: JSSCACS** 

**Date of Practical Examination:** 

(Autonomous)

BN Road, Mysuru - 570025



#### **CERTIFICATE**

This is to certify that the project work entitled "Scar global life insurance management system" carried out by Rudra prasad S bearing register number U01BE21S0047 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2022-23 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

Signature of the HOD

JSS COLLEGE, MYSURU-25

Dept. of Computer Science

University Examination

Signature

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7)

Name of the Candidate: RUDRAPRASAD S

Reg no: U01BE21S0047

**Examination Centre: JSS CACS** 

Date of Practical Examination:

#### An Autonomous College, Affiliated to University of Mysore

Ooty Road, Mysuru - 570 025



#### **CERTIFICATE**

This is to certify that the Project work entitled "PERSONALISED FITNESS APPLICATION" is a Bonafede work carried out by GAGAN S [U01BE21S0048] student of 6<sup>th</sup> semester, BCA, in partial fulfilment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2023-2024. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

Ms. SHREYASHWINI
Assistant Professor

Dept. of Computer Science

Mr VIDHYASHANKARA

Dept. Of Computer Science

Name of the Examiner suter Science Dept. of Confession Science

1) University Examinar 5

2) Signature

1)

Signature with Date

An Autonomous College, Affiliated to University of Mysore

Ooty Road, Mysuru – 570 025



#### CERTIFICATE

This is to certify that the Project work entitled "COLLEGE STOCK MANAGEMENT SYSTEM" is a Bonafede work carried out by BHANUPRIYA B [U01BE21S0049] student of 6<sup>th</sup> semester, BCA, in partial fulfilment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2023-2024. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the

department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

Ms. SHREYASHWINI
Assistant Professor
Dept. of Computer Science

Mr. VIDHYASHANKARAS

Head of The Department

Dept. of Computer Science

**External Viva-Voce** 

Name of the Examination:

University Examination:

V//

Signature of the Examination:

1)

Signature with Date

(Autonomous)

Ooty Road, Mysuru - 570025



#### **CERTIFICATE**

This is to certify that the project work entitled "ERP System For College Management" carried out by YOGITHA.N[U01BE21S0026] has successfully completed the project work in VI semester by partial fulfillment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

Signature of the HOD
Dept. of Computer Science
College of Arts, Commerce & Science
Ooty Road, MYSURU-25

JSS COLLEGE, MYSURU-25 Dept. of Computer Science	
University Examinations	Name of the Candidate: You tho. N Reg No: VOI BEDISODD 6
Signature	Examination Centre:JSS CAG Mylore
" 12]	Date of Practical Examination:06 07 3034



(Autonomous)

Ooty Road, Mysuru - 570025



#### **CERTIFICATE**

This is to certify that the project work entitled "ERP System For College Management" carried out by MEGHANA G[U01BE21S0109] has successfully completed the project work in VI semester by partial fulfillment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

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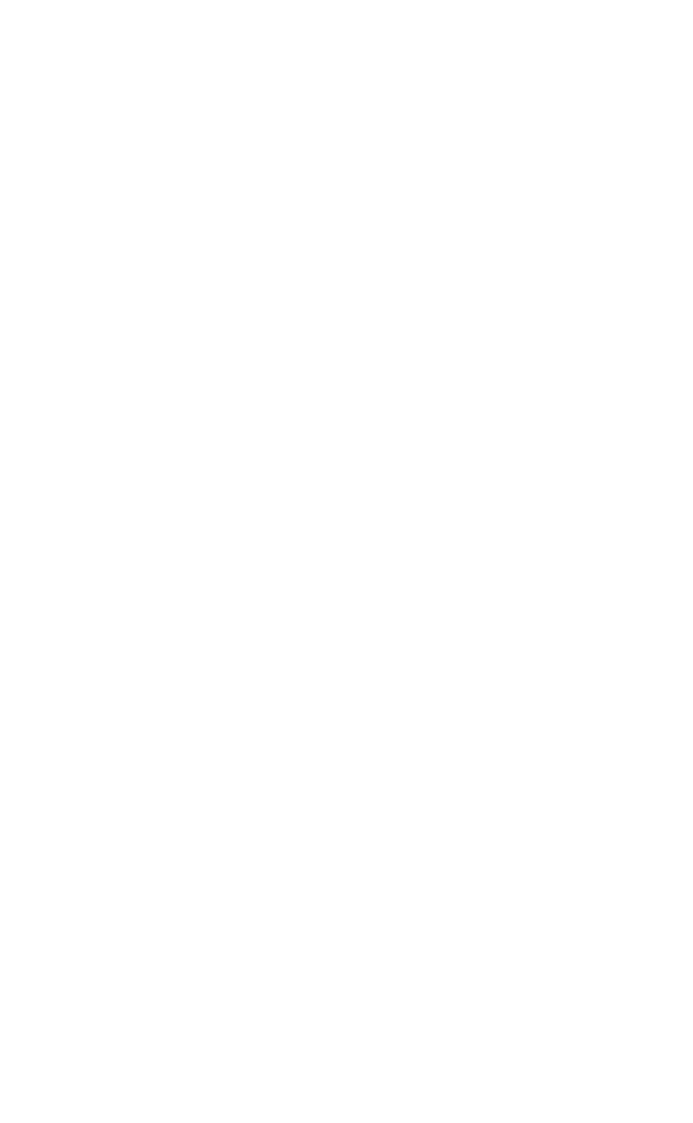
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Dept. of Computer Science

JSS College of Arts, Commerce & Science

Ooty Road, MYSURU-25

JSS COLLEGE, MYSURU-25 Dept. of Computer Science	Name of the Candidate: Mechana, Cr.
University Examination:	Reg No: U01BE21S0109
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Ooty Road, Mysuru - 570025



#### **CERTIFICATE**

This is to certify that the project work entitled "ERP System For College Management" carried out by MEGHANA G[U01BE21S0109] has successfully completed the project work in VI semester by partial fulfillment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

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Signature of the HOD

Dept. of Computer Science

Dept. of Arts, Commerce & Science

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Ooty Road, Mysuru - 570025



#### **CERTIFICATE**

This is to certify that the project work entitled "ERP System For College Management" carried out by MYNA M M[U01BE21S0088] has successfully completed the project work in VI semester by partial fulfillment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

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An Autonomous college, Affiliated to University of Mysore Ooty road, Mysore-570025



#### CERTIFICATE

This is to certify that the Project work entitled "RESTAURANT MANAGEMENT SYSTEM" is a Bonafide work carried out by MALASHREE A P(U01BE21S0087) student of 6th semester, BCA, in partial fulfillment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2022-2023. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

Divyashree M.S

**Assistant Professor** Dept. of Computer Science Mr. VIDHYASHANKARA Head of The Deputement if no

155 COLLEGE, MYSURU-25 External Viva-Depte of Computer Science Name of the Extening tersnination 1) Signature



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OOTY ROAD, MYSURU – 570 025

# DEPARTMENT OF COMPUTER SCIENCE



#### **CERTIFICATE**

This is certify that project work entitled "Peer to Peer ride sharing" carried out by Pooja S V and B R Srushti bearing Register Number — U01BE21S0024 and U01BE21S0022 satisfactorily completed the project work in VI Semester by partial fulfilment for the award of the degree of

**Bachelor of Computer Application** by JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) MYSURU during the academic year 2022-2024.

Signature of the Guide

Signature of the HOD

Dept. of Computer Science 'SS College of Arts, Commerce & Science

Ooty Road, MYSURU-25

Date of the Examination:

Name & Signature of Examiners:

JSS COLLEGE, MYSURU-25
Dept. of Computer Science

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#### DEPARTMENT OF COMPUTER SCIENCE



#### **CERTIFICATE**

This is certify that project work entitled "Peer to Peer ride sharing" carried out by B R Srushti and Pooja S V bearing Register Number – U01BE21S0022 and U01BE21S0024 satisfactorily completed the project work in VI Semester by partial fulfilment for the award of the degree of

**Bachelor of Computer Application** by JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) MYSURU during the academic year 2022-2024.

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Dept. of Computer Science

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BN Road, Mysuru - 570025



#### CERTIFICATE

This is to certify that the project work entitled "Student Information System" carried out by Aditya S Singh bearing register number U01BE21S0406 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

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Signature of the HOD

JSS COLLEGE, MYSURU-25
Dept. of Computer Science
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Name of the Candidate: ADITYA S SINGH

Reg no: U01BE21S0406

**Examination Centre: JSS CACS** 

Date of Practical Examination:

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BN Road, Mysore -570 025



# **CERTIFICATE**

This is to certify that project work entitled "Peer to Peer ride sharing" carried out by GRISHMA CD bearing Register Number - U01BE21S0025 satisfactorily completed the project work in VI Semester by partial fulfilment for the award of the degree of

**Bachelor of Computer Application** by JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) MYSURU during the academic year 2022-2024.

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Signature of the Guide

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Date of the Examination:

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#### CERTIFICATE

This is to certify that the project work entitled "Travel management system" carried out by V.Rahul bearing register number U01BE21S0300 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

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Signature of the HOD

JSS COLLEGE, MYSURU-25
Dept. of Computer Science
University Examination:

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Name of the Candidate: V Rahul

Reg no: U01BE21S0300

Examination Centre: JSSCACS

Date of Practical Examination:

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BN Road, Mysuru-570 025



#### CERTIFICATE

This is to certify that the project work entitled "Smart City Application" carried out by Roshan Gowda C N, bearing Register Number U01BE21S0118, has been successfully completed in the VI Semester as a part of the requirements for the award of the Bachelor of Computer Application degree by JSS College of Arts, Commerce, and Science (Autonomous), Mysuru, under the University of Mysore, during the academic year 2023-24. The project work has been reviewed and approved, meeting the academic standards and requirements prescribed for the final semester BCA program.

Signature of the Guide

Signature of the HOD

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Examination Centre:

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BN Road, Mysuru-570 025



#### CERTIFICATE

This is to certify that the project work entitled "Smart City Application" carried out by Niranjan S, bearing Register Number U01BE21S0190, has been successfully completed in the VI Semester as a part of the requirements for the award of the Bachelor of Computer Application degree by JSS College of Arts, Commerce, and Science (Autonomous), Mysuru, under the University of Mysore, during the academic year 2023-24. The project work has been reviewed and approved, meeting the academic standards and requirements prescribed for the final semester BCA program.

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Dept. of Computer Science

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#### CERTIFICATE

This is to certify that the project work entitled "Cyber Café Management System" carried out by Sagar D K, bearing Register Number U01BE21S0170, has been successfully completed in the VI Semester as a part of the requirements for the award of the Bachelor of Computer Application degree by JSS College of Arts, Commerce, and Science (Autonomous), Mysuru, under the University of Mysore, during the academic year 2023-24. The project work has been reviewed and approved, meeting the academic standards and requirements prescribed for the final semester BCA program.

Signature of the Guide

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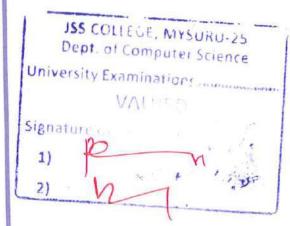


#### CERTIFICATE

This is to certify that the project work entitled "Travel management system" carried out by Sumukha Bhat H A bearing register number U01BE21S0110 has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

Signarure Of May 180 Science
Dept. Of Arts, Commerce & Science
Ooty Road, MYSURU-25



Name of the Candidate: Sumukha Bhat H A

Reg no: U01BE21S0110

**Examination Centre: JSSCACS** 

Date of Practical Examination: 09-01-2024

(Autonomous) BN Road, Mysuru-570 025



# **CERTIFICATE**

This is to certify that the project work entitled "Supply-Chain Management System" carried out by Tejaswi R Rao, bearing Register Number U01BE21S0264, has been successfully completed in the VI Semester as a part of the requirements for the award of the Bachelor of Computer Application degree by JSS College of Arts, Commerce, and Science (Autonomous), Mysuru, under the University of Mysore, during the academic year 2023-24. The project work has been reviewed and approved, meeting the academic standards and requirements prescribed for the final semester BCA program.

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Ooty Road, Mysuru – 570025



This is to certify that the Project work entitled "AUTOMATIC TIMETABLE GENERATOR" is a Bonafede work carried out by HARSHAMV.

[U01BE21S0081] student of 6<sup>th</sup> semester, BCA, in partial fulfilment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2023-2024. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

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Assistan	t professor
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Mr. VIDHYA	SHANKARA	A
Head of the De	partment	
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An Autonomous College, Affiliated to University of Mysore

Ooty Road, Mysuru - 570025



This is to certify that the Project work entitled "AUTOMATIC TIMETABLE GENERATOR" is a Bonafede work carried out by MITHIN KUMAR TM [U01BE21S0062] student of 6<sup>th</sup>semester, BCA, in partial fulfilment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2023-2024. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

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Mrs. NAGALAMBIKE	
Assistant professor	Head of the Department
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Ooty Road, Mysuru - 570025



#### CERTIFICATE

This is to certify that the project work entitled "OUTCOME BASED EDUCATION" carried out by Ranjitha c k(U01BE21S0112) and Suchithra S (U01BE21S0113) bearing register number has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

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Dept. of Computer Science

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Ooty Road, Mysuru - 570025



#### **CERTIFICATE**

This is to certify that the project work entitled "OUTCOME BASED EDUCATION" carried out by Suchithra S(U01BE21S0113) and Ranjitha C K(U01BE21S0112) bearing register number has successfully completed the project work in VI semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and science (Autonomous) Mysore under University of Mysore, During the academic year 2023-24 The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA

Signature of the Guide

Signature of the HOD

Dept of Computer Science

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# DEPARTMENT OF COMPUTER SCIENCE



# **CERTIFICATE**

This is certify that project work entitled "E-LEARNING MANAGEMENT SYSTEM" carried out by Maheshwari M, bearing Register Number – U01BE21S0051, satisfactorily completed the project work in VI Semester by partial fulfilment for the award of the degree of Bachelor of Computer Application by JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) MYSURU during the academic year 2023-2024.

Signature of the Guide

Signature of the HOD

Date of the Examination:

JSS COLLEGE, MYSURU-25

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# DEPARTMENT OF COMPUTER SCIENCE



# **CERTIFICATE**

This is certify that project work entitled "E-LEARNING MANAGEM SYSTEM" carried out by Bhanupriya K B, bearing Register Numb U01BE21S0059, satisfactorily completed the project work in VI Semestr partial fulfilment for the award of the degree of Bachelor of Comp Application by JSS COLLEGE OF ARTS, COMMERCE & SCIE (Autonomous) MYSURU during the academic year 2023-2024.

Signature of the Guide

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JSS COLLEGE, MYSURU-25 Dept. of Computer Science

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# JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) B.N. Road, Mysuru - 570025



# CERTIFICATE

This is to certify that the project work entitled "Mentor & Mentee System" carried out by Kruthika H.S being register No: U01BE21S0066 has successfully completed the project work in VI<sup>th</sup> Semester by partial fulfilment of the award of Bachelor of Computer Application by JSS College of Arts, Commerce and Science (Autonomous) Mysore under university of Mysore, during the academic year 2023-24. The work has been approved as it satisfies the academic requirements in respect of project work prescribed for the final semester BCA.

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OOTY ROAD, MYSURU – 570 025

# DEPARTMENT OF COMPUTER SCIENCE



# **CERTIFICATE**

This is certify that project work entitled "SIGNATURE FORGERY DETECTION SYSTEM" carried out by Madan A S, bearing Register Number – U01BE21S0054, satisfactorily completed the project work in VI Semester by partial fulfilment for the award of the degree of Bachelor of Computer Application by JSS COLLEGE OF ARTS, COMMERCE & SCIENCE (Autonomous) MYSURU during the academic year 2023-2024.

Signature of the Guide

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Name & Signature of Examiners

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Ooty road, Mysore-570025



#### CERTIFICATE

This is to certify that the Project work entitled "ANDROID APPLICATION FOR BLIND PEOPLE" is a Bonafede work carried out by NIRMITHA M(U01BE21S0089) and RAKSHITHA D(U01BE21S0090) student of 6<sup>th</sup> semester, BCA, in partial fulfilment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2022-2023. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

ms. GAYATHRI U G 21 6 24

Ms. GAYATHRI U G 21 6 24

Assistant Professor

Dept. of Computer Science

External Viva-Voce

Name of the Examination Computer Science

University Examination Signature

Signature

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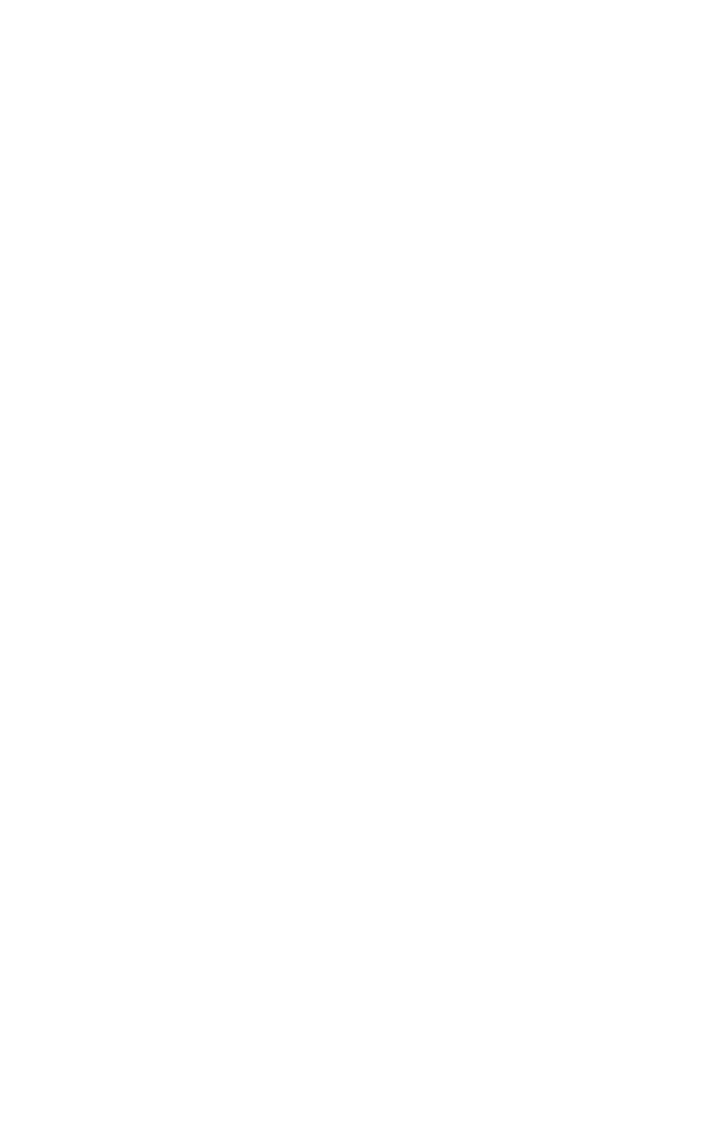
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Ooty Road, Mysuru - 570 025



# CERTIFICATE

This is to certify that the Project work entitled "EVENT MANAGEMENT SYSTEM" is a Bonafede work carried out by VIGNESH KUMAR B [U01BE21S0108] student of 6th semester, BCA, in partial fulfilment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2023-2024. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the

department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

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Assistant Professor Dept. of Computer Science lodyes he

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Name of the Examiners

Signature with Date

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Ooty road, Mysore-570025



# **CERTIFICATE**

This is to certify that the Project work entitled "ANDROID APPLICATION FOR BLIND PEOPLE" is a Bonafede work carried out by RAKSHITHA D (U01BE21S0090) and NIRMITHA M(U01BE21S0089) student of 6<sup>th</sup> semester, BCA, in partial fulfilment for the award of the degree in Bachelor of Computer Applications as prescribed by JSS CACS, Mysuru during the academic year 2022-2023. It is certified that all the suggestions and corrections indicated for the internal assessment have been incorporated in the report deposited in the department library. The report has been approved as it satisfies the requirements in respect of project work prescribed for the said degree.

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Ooty Road, Mysuru - 570 025



# **CERTIFICATE**

This is to certify that the Project work entitled "CITY CRAFT" out by RAKSHITHA R [U01BE21S0082] student of 6th semester for the award of the degree in Bachelor of Computer Applica CACS, Mysuru during the academic year 2023-2024. It is cert and corrections indicated for the internal assessment have been deposited in the department library. The report has been a requirements in respect of project work prescribed for the said de

Ms. GAYATHRI U

Mr. VI

Assistant Professor

Dept. Of Computer Science

**External Viva-Voce** Name of the Examiners

JSS COLLEGE, MYSURU-25 Dept. of Computer Science 2) University Examinations VALUED Signature of fee 1)

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Volume 10, France 5 in May 2024

EDITOR IN CHIEF



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Email id : editor@ijsart.com | website : www.ijsart.com



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#### NUMBER PLATE RECOGNITION ANDROID APP FOR AUTOMATIC VEHICLE

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