GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY
(AUTONOMOUS)
Gangavaram (V), Kovur (M), S.P.S.R. Nellore – 524137
Accredited with NAAC 'A' Grade & NBA (B. Tech - ECE, EEE & MECH)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

TECHNICAL MAGAZINE

TECH SPARK

ACADEMIC YEAR : 2022-23

VOLUME 2 / ISSUE 2
(JAN-JUN)

HALF YEARLY COMPUTER SCIENCE ENGINEERING MAGAZINE

AY: 2022-23 **VOLUME: 2** **ISSUE: JAN-JUN**

GEETHANJALI INSTITUTE OF SCIENCE AND TECHNOLOGY

3rd Mile, Bombay Highway, Gangavaram (V), Kovur (Md), S.P.S.RNellore (Dt)

www.gist.edu.in

Editorial Message

Well-written technical articles contribute to the total body of knowledge for the engineering community and will potentially help many engineers. Articles do not need to be detailed “academic-level” work. In fact, some of the most popular articles are “down to earth” practical applications of existing or new technology.

Editorial Board

VISION-MISSION

VISION

To evolve as a leading computer science and engineering centre producing competent technocrats to meet the demands of ever-changing industry and society.

MISSION

DM1: Impart quality education through innovative teaching learning processes

DM2: Motivate the learners to upgrade technical expertise by promoting learner centric activities.

DM3: Inculcate values and interpersonal skills in the learners towards overall development.

DM4: Upgrade knowledge in cutting edge technologies keeping pace with industrial standards through collaborations.

PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

Graduates of B. Tech in Computer Science and Engineering program shall able to

PEO1: Outperform in professional career or higher learning by upgrading skills in Computer Science and Engineering stream.

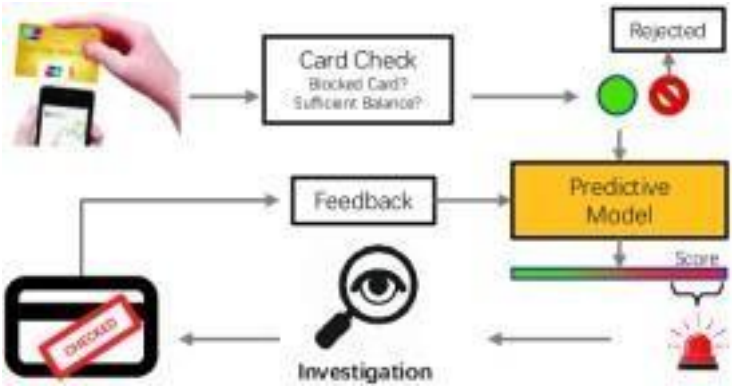
PEO2: Provide computing solutions for complex problems to meet industry demands and societal needs.

PEO3: Offer ethical, socially sensitive solutions as professionals and as entrepreneurs in Computer Science and other engineering disciplines.

PEO4: Leverage new computing technologies by engaging in perpetual learning.

CREDIT CARD FRAUD DETECTION SYSTEM PYTHON

Recently, with the advent of technological innovation and the emergence of new e-service payment solutions, such as e-commerce and mobile payments, credit card transactions have become ubiquitous. Because cashless transactions are so widely accepted, fraudsters carry out fraudulent assaults frequently and modify their strategies to escape detection. Credit card fraud is defined as unauthorized card usage, unusual transaction behavior, or transactions on an inactive card. Credit card breaches have been trending alarmingly in the past couple of years.



Our python-based Credit Card Fraud Detection System is designed as a countermeasure to combat illegal activities. It ensures secured transactions for credit-card owners when using their credit cards to make electronic payments for goods and services. In the proposed system, we used Random Forest Algorithm (RFA) for finding the fraudulent transactions and the frequency of those transactions.

Our Python-based Credit Card Fraud Detection System consists of 1 module: Admin. To access the system, the admin will need to login into the system. The login is of two-factor authentication. Admin will enter their email address and password. After entering the registered email address, OTP will be sent to their respective email address.

After successfully logging into the system, the admin can view customer details, create payment links, generate payment links and view fraudulent customers. In View Customers, the admin can view all users and their details like Name, Address, Phone number, Transaction History, etc..

After the Payment Link is created, the customer will need to enter their Name, Phone number, Billing Address, Shipping Address, and CNIC number. When all this data is entered and submitted rules are applied accordingly, it will check which type of transaction it is like Completed Transaction, Under-Review Transactions, Declined Transactions, and Flagged Transactions. If all the rules are passed, only then the payment will be successful.

Advantages

- · The system is easy to maintain.
- · It is user-friendly.
- · Higher accuracy of fraud detection
- · Fewer false declines.

Chemukula Ajith(192U1A0520)

ANDROID STEP COUNTER

These days everyone is very keen and very particular when it comes to health and health is directly proportional to your diet and Exercise. So we present to you a system which takes care of your health in 3 main roles step counter, sleep intake and water intake. While registering into the system, the user needs to enter his age, height, weight and gender to determine BMI and calculate the sleep and water intake per day. Here in this scenario the Step Counter uses the accelerometer sensor to get the input for counting the steps and shows a graph to you of your daily steps. While in water and sleep the system generates the amount of sleep and water the user should have per day, also the user can edit his physical attributes to as and when they are changed and accordingly the sleep and water intake also changes.

Modules:

- **Registration:** The user has to register into the system with his physical attributes and other details.
- **Login:** The user has to sign in and will be signed in till he signs out.
- **Profile:** The user can update his physical attributes in the profile tab.
- **Step Counter**: The steps are counted in the background and shown in the form of line graph of the entire month.
- **Sleep Intake:** The system tells the user about his daily Sleep intake considering his physical attributes which can be changed.
- **Water Intake:** The system tells the user about his daily Water intake considering his physical attributes which can be changed.

Advantages:

· Doesn't need Internet.

· Doesn't require for the app to be Active.

· Helps you track your steps in any phone with accelerometer sensor which almost any basic smart phone has.

· The data is automatically updated when the user updates his physical attributes.

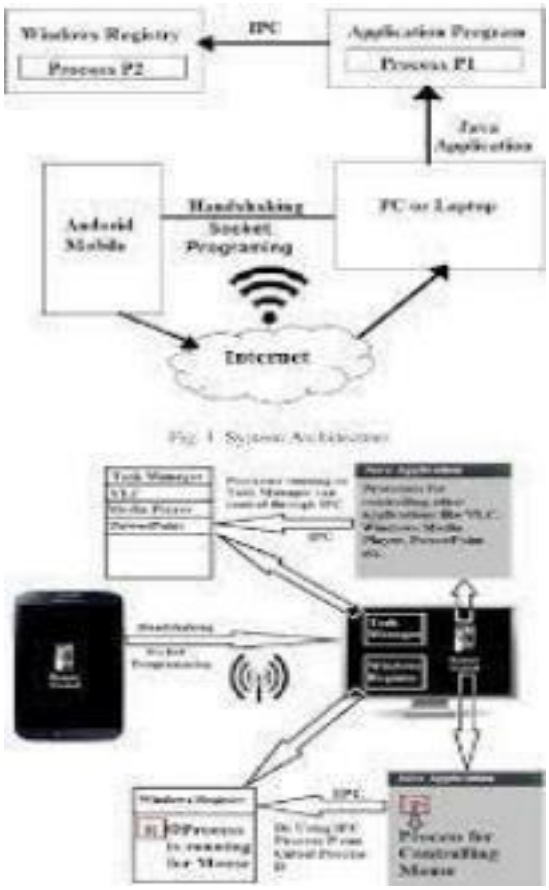
Disadvantages:

· Uses SQLite, the data is phone dependent.

· Accelerometer is not accurate.

Janjam Lahari(192U1A0546)

ANDROID PC CONTROLLER



An android PC controller is an android application project that works like PC mouse. The project controls pc keyboard functions and mouse operations through an android mobile phone. By just connecting it to the wifi router, and mentioning the ip address of the host pc, and port number of running system. This android system is based on the concept of using an android phone as a mouse. The software application is installed on an android phone and allows users to play games or control other pc functionality through their cell phone.

The application is made using Eclipse and creates a QWERTY keypad buttons similar to the one used in PC. The application when installed and run on an android based phone shows a keypad settings screen. With the keypad user can even use it for typing it on any word processor and can operate any application.

The application requires a wifi connection between the computer and the android device. Thus user can remotely access the computer instead of sitting beside it. Thus the application overcomes the limitations of a mouse.

Advantages:

- The system can be used from anywhere by the users.
- Excludes the use of mouse.
- The system is flexible and secured to be used.

Disadvantages:

- The system requires an android device and wifi connection.
- It can't be performed over LAN Connection.

Applications:

- This project can be used in commercial organizations, corporations.
- It can also be used in schools, colleges, institutes, banks for demonstration purposes.

Shaik Mohammad Suleman(192U1A05A2)

ANDROID BASED STUDENT-FACULTY DOCUMENT SHARING SYSTEM

This project is an online portal between students and faculty. This innovative system allows college faculty to share important data as well as notifications with engineering students. It consists of a faculty login along with student login. Since college faculty operate through pc and document uploading is simpler through a pc, the faculty login is to be performed through a computer. Faculty may upload documents of subject syllabus, timetable document, notifications,
e notes etc through their provided login. The documents are uploaded by faculty to different corresponding departments. We propose to build this system on an online server that allows faculty to upload data and students may view search and download required documents through their android device. Here students only see and download data of their particular semester. Rest data is hidden. Faculty may access and upload/edit documents to any semester or add any notice as desired.

Features:

· **User login:** This allows only the registered users to login in order to use this location tracking application.

· **Document details:** This module stores documents in word and pdf format and also allows students to view particular data.

· **Server management:** The server smartly handles data and allows students with an android device to access data as well as faculty to upload document details.

Advantages:

· This project has a login page which allows only the registered user to login and thereby preventing unauthorized access.

· This system can be used to view all the syllabus, updates details.

· The android mobile user will be able make quick download from anywhere using internet ·

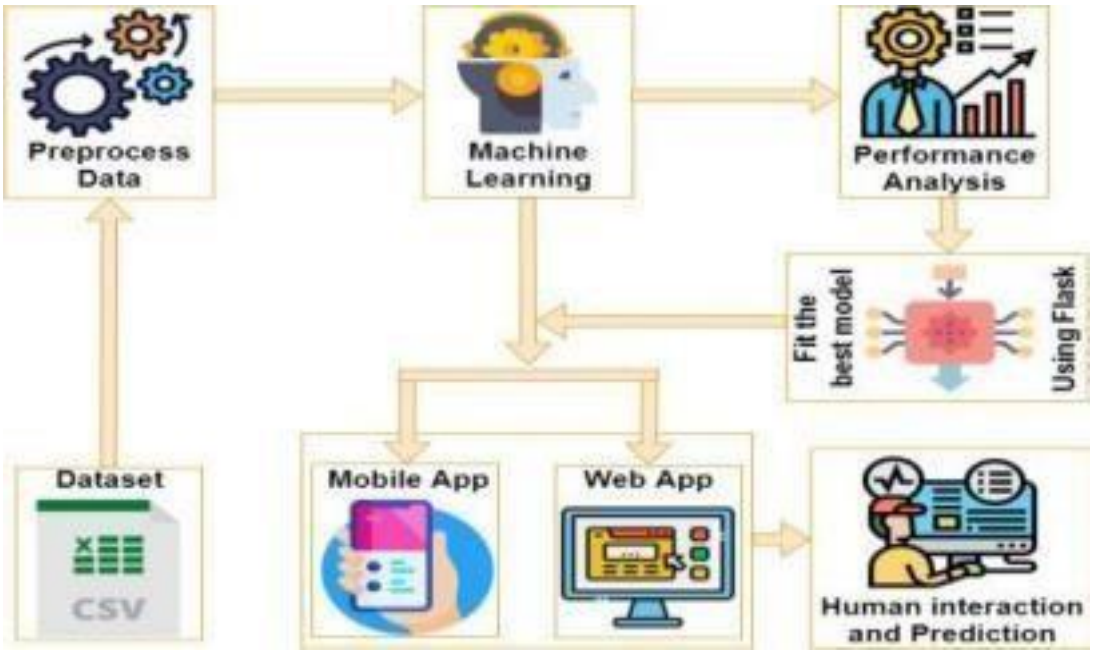
Usage of this application will greatly reduce time in engineering document sharing.

Disadvantages:

· The android mobile user will not be able to insert or view details if the server goes down. Thus there is disadvantage of single point failure.

Daddala Vivek(202U1A0519)

STROKE PREDICTION SYSTEM USING LINEAR REGRESSION



A stroke is defined as an acute neurological disorder of the blood vessels in the brain that occurs when the blood supply to an area of the brain stops and the brain cells are deprived of the necessary oxygen. According to the World Stroke Organization, 13 million people get a stroke each year, and approximately 5.5 million people will die as a result. It is the leading cause of d eath and disability worldwide, and that is why its imprint is serious in all aspects of life. Stroke not only affects the patient but also affects the patient's social environment, family and workplace. In addition, contrary to popular belief, it can happen to anyone, at any age, regardless of gender or physical condition.

To help save a life who might have a probability of stroke, we have designed a Stroke Prediction System using Linear Regression. The objective of implementing the system on a web platform is to reach as many individuals as possible. The development of this ML model could aid in the early detection of stroke and the subsequent mitigation of its severe consequences.

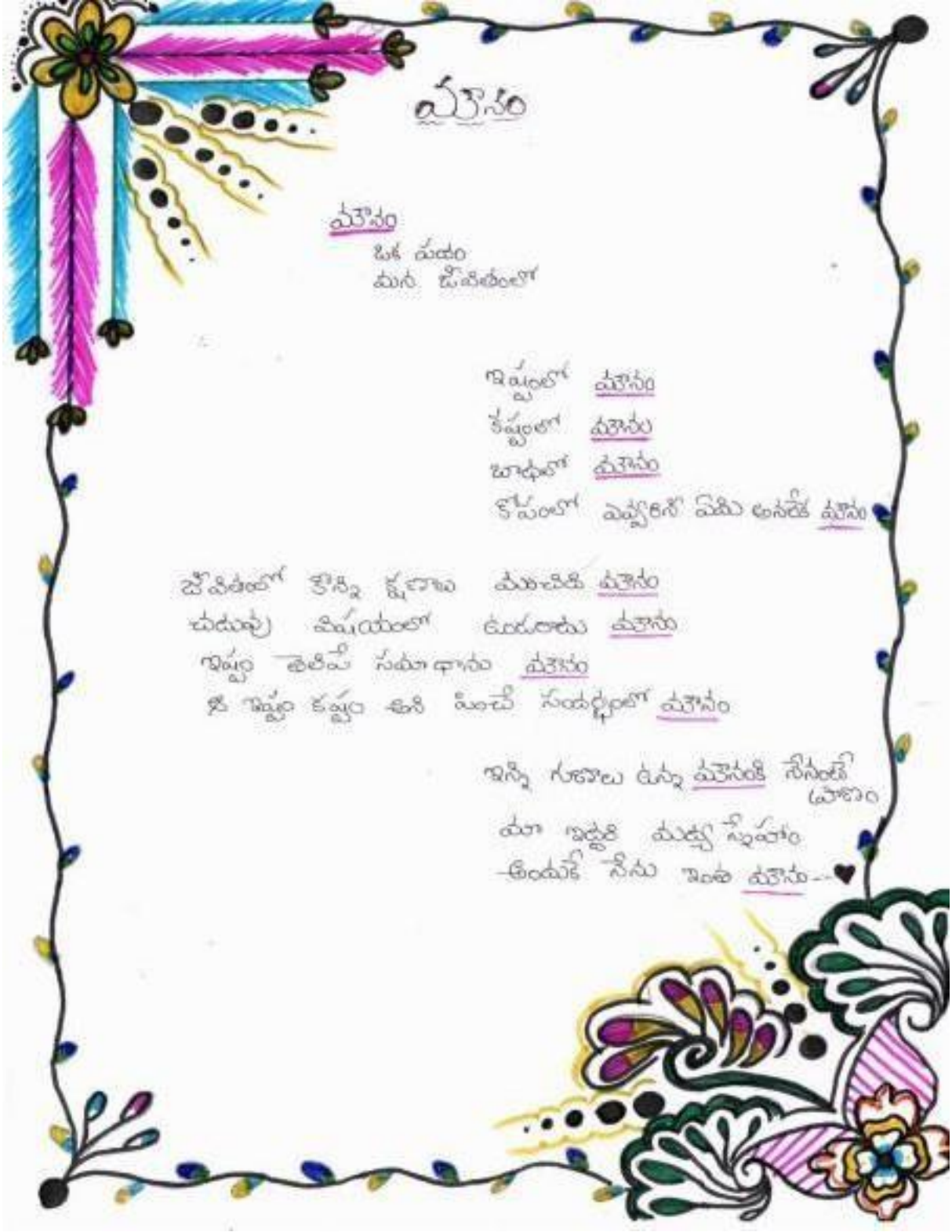
The system comprises 1 module namely User.

The user would require to register first to access the system. After registering successfully, the user can log in using their credentials. In order for the system to predict if there is a risk of stroke, the user would require to enter certain inputs. If there is a risk of stroke, the system will redirect to a page where the user can view the nearby hospitals and the stroke details along with its causes, symptoms and treatment.

The technologies used to develop this system involve HTML, CSS and JavaScript in the front end and Python in the backend. The database used is MySQL and the framework used is Django. The dataset is used from Kaggle. The algorithm used to design the working of this system is Logistic Regression. It is used to characterize the data and illustrate the association between one dependent binary variable and one or more conditional, ordinal, period, or ratio-level independent variables.

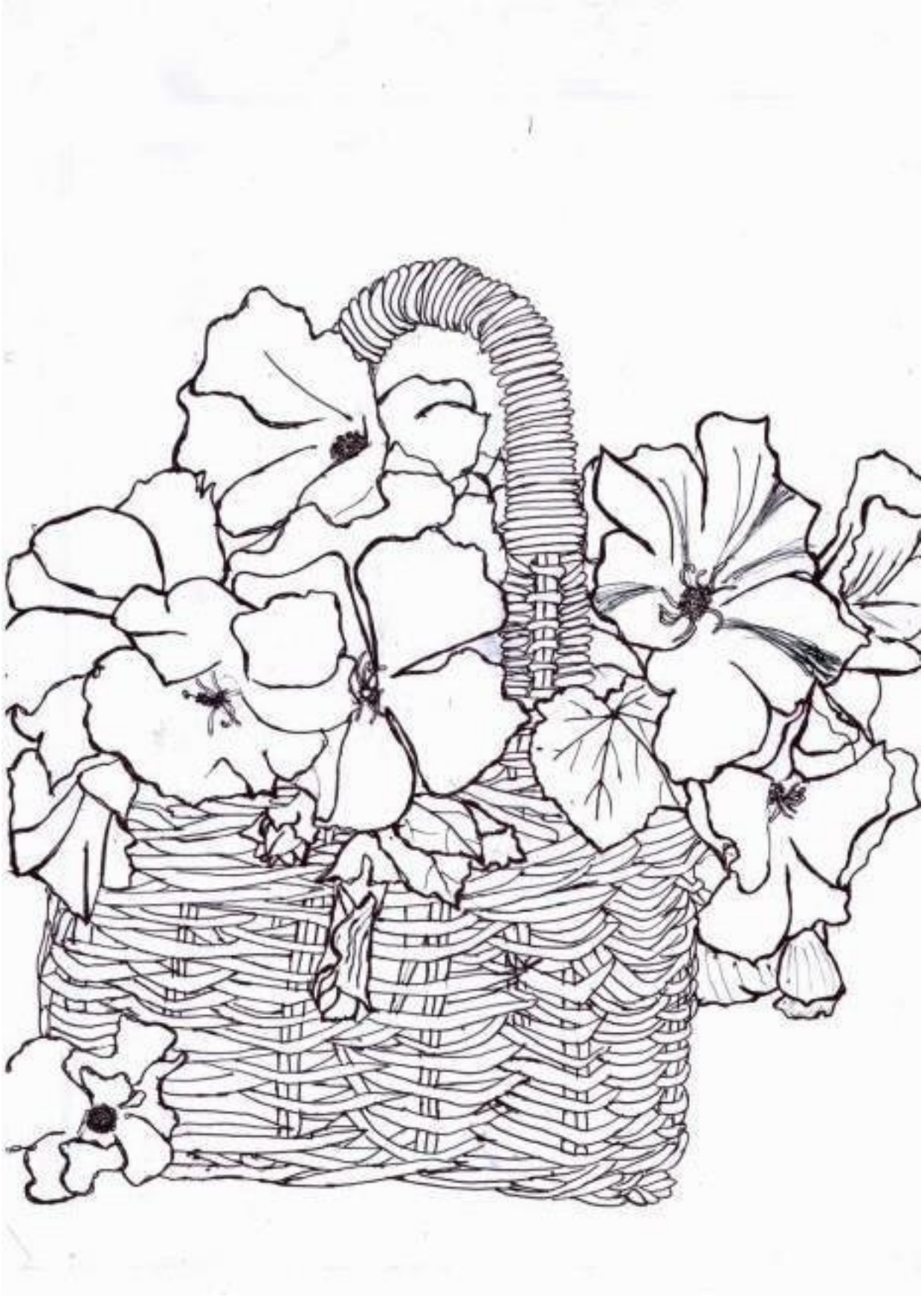
Paniboina Prathyusha(202U1A0575)

Shaik Mehathaj(202U1A0593)



Thoneti Vyshnavi(202U1A05B2)

Annam Bhanu Teja(212U1A0503)



Damavarapu Praveena(212U1A0522)

LAKKU PRASANNA(212U1A0553)

Syed Asma(212u1a05b0)

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

PO1. **Engineering Knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

PO2. **Problem Analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

PO4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

PO6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO7 **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO8 **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO9 **Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO10 **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions

PO11 **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO12 **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES

PSO1: Apply the knowledge of adaptive algorithms to develop quality software applications.

PSO2: Demonstrate the capabilities in basic and advanced technologies towards getting employed or to become an entrepreneur.