MRCE

MALLA REDDY COLLEGE OF ENGINEERING

DEPARTMENT OF

CSE – (DATA SCIENCE) & AI&DS

NOVEMBER - 2023

INNOVISTA

Students Magazine

2023

MRCE

MALLA REDDY COLLEGE OF ENGINEERING
(Approved by AICTE(New Delhi), Permanently Affiliated to JNTUH & Accredited by NBA & NAAC)
Recognized under Section 2(f) & 12(B) of the UGC Act 1956, An ISO 9001:2015 Certified Institution.

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FROM THE CHAIRMAN'S DESK.....

Intellectuals are not born but are made. They live a trail with unmatched perseverance, rocky commitment in their principled endeavors. Visionaries' logical and reasonable encounters in their walks of life, become values, these conscientious values are irradiating millions of student fraternity and kindled their careers.

This millennium poses numerous challenges to educational institutions, who chant quality mantra. An institution of par excellence, has reached unflinching success, in its strides of imparting quality education recognized. This feat was achieved by the Chairman of MRGI, in all his humble, mesmerizing and charismatic ways.

Owing to all this, MRGI has become a house-hold name, it has become the destination point for scintillating success and un parallel careers. As the largest Hi-Tech, State-f-Art facilitated private campus in Southern-India. It is catering to the needs of infotainment and technical explosion.

Sri. Ch. Malla Reddy Garu
Founder Chairman

FROM THE SECRETARY'S DESK……..

MRCE has grown significantly in the recent past and continues to work relentlessly to sustain its growth. Through this edition, readers will realize the tremendous changes that are happening in the MRCE campus. The magazine highlights a glimpse of growth of the institution on many fronts. The college has been simply unstoppable in its progress as it has been actively involved in various activities that have brought to light the hidden talents of students. The highly qualified and dedicated members of staff have always carried out their duties with a high level of commitment. This magazine has recorded contributions such as articles and art work of students. They stand as a witness to the monumental efforts taken by the management to make the college a center of excellence in education and research. I wish the management, staff and students of the college success in their future endeavors.

Sri. Ch. Mahender Reddy Garu
Secretary

FROM THE PRESIDENT'S DESK…….

In the pages of this magazine, you will find a celebration of your academic excellence, artistic endeavors, and the diverse range of activities that make our college a dynamic place for learning and personal development. Your dedication and commitment to your studies and extracurricular activities continue to inspire all of us.

Remember that your time in college is not only about acquiring knowledge but also about building lifelong friendships, nurturing your passions, and preparing for the future. I encourage you to make the most of this invaluable period in your lives.

I want to express my gratitude to our dedicated faculty, staff, and the editorial team for their tireless efforts in bringing this magazine to life. Their hard work has ensured that your accomplishments and stories are shared with the college community.

Dr. Ch. Bhadra Reddy Garu
President

FROM THE PRINCIPAL'S DESK……

I am thrilled to share the incredible achievements of our outstanding student body at our college. Each one of you has contributed to the vibrant tapestry of success that defines our academic community. From groundbreaking research projects to winning prestigious competitions, our students have demonstrated exceptional prowess in various fields. Moreover, our students have not only shone academically but have also displayed commendable leadership skills. Your active participation in student organizations, community service, and collaborative initiatives has enriched the college experience for everyone.This magazine serves as a celebration of your accomplishments, both big and small. It is a reflection of the collective success that defines our college community. I encourage each one of you to take a moment to appreciate your achievements and the incredible journey you are on.Remember, your success is not just a personal triumph but a source of inspiration for your peers and the generations that will follow. Keep striving for greatness, continue to push boundaries, and embrace the challenges that come your way. I look forward to witnessing even more remarkable achievements from each and every one of you. Together, let's continue to make our college a hub of excellence and innovation.

Dr. M. Ashok
Principal

FROM THE VICE PRINCIPAL'S DESK……

From academic excellence to extracurricular brilliance, our students have consistently demonstrated a commitment to excellence. Whether it's securing top positions in national competitions, showcasing artistic brilliance, or contributing to impactful community projects, your diverse achievements underscore the dynamic and accomplished nature of our student body.

As Vice Principal, I am proud to witness the passion and dedication that each of you brings to your respective fields. Your achievements go beyond individual success; they contribute to the collective success and reputation of our college.

Furthermore, your leadership within student organizations and engagement in community service projects showcase the positive impact our students make beyond the classroom. These initiatives not only reflect your commitment to personal growth but also your dedication to making a meaningful difference in the world around you.

Dr. T. V. REDDY
Vice Principal

FROM THE DEAN'S DESK……

It is with immense pride and admiration that I share the extraordinary achievements of our student community at our college. Your accomplishments, both academically and beyond, are a testament to the vibrant and thriving environment that defines our academic institution. This magazine serves as a tribute to your hard work, resilience, and accomplishments. It is a showcase of the collective brilliance that defines our college community. I encourage each of you to take a moment to reflect on your journey, appreciate your growth, and celebrate the milestones you've achieved.

As Dean, I am honored to witness the transformative journey of our students. Your success is not only a reflection of your individual capabilities but also a testament to the nurturing and intellectually stimulating environment our college provides.

May this magazine inspire future generations of students to dream big, work hard, and aspire to reach the heights of achievement that you have collectively attained. Congratulations on your outstanding accomplishments, and I look forward to witnessing your continued success and contributions to our academic community.

Dr. SUNIL TEKALE
Dean

FROM THE HOD'S DESK……

Welcome to the Department of Computer Science and Engineering (Data Science) at Malla Reddy College of Engineering. We are happy to release another issue of our department Newsletter-under the banner of INNOVISTA 2023.The Department of CSE-Data Science & AI &DS commits to work towards developing engineering students with a rich set of competent, technical, managerial and social skills and contribute to their professional growth. Department places emphasis on all the important aspects of computers such as Programming, Algorithm Design, Operating Systems, Computer Networks, Mobile Communication, Artificial Intelligence, Machine Learning and many more .Special focus is given to subjects like Fundamentals of Data Science, Data Pre-processing, Data Analytics, Data Visualization, etc. These will help the students in acquiring the required knowledge and expertise to start their career as a Data Analyst, Data Scientist and many other opportunities. Many seminars, conferences, certifications and training sessions are also conducted by the department to make the students develop themselves globally Department also takes the initiative to improve the soft skills, analytical capabilities and verbal communication of the students so that they can face the competition in the corporate world confidently.

"Hard work beats talent when talent doesn't work hard."

Dr. J. Gladson Maria Britto
HOD CSE - (DS) & AI&DS

ABOUT THE DEPARTMENT

- The Department of Computer Science and Engineering (Data Science) was established in year 2020 in MRCE with an intake of 60 seats, which now became within a short span period over an intake of 240 seats, with an aim to prepare Generation Z professionals for a career in Data Science

- Our state of art curriculum provides students with skills and leadership preparation which enables them to get knowledge in analysis of data, statistics, big data, visualization, Machine learning and Artificial Intelligence.

- The goal of MRCE Data Science is to weave data science research and methods into the University's fabric, giving our faculty and students the tools, skills, and understanding they need to do the cutting-edge research that will drive 21st-century scholarship and education.

- Data science is a branch of computer science dealing with capturing, processing, and analyzing data to gain new insights about the systems being studied.

- Data Science aims to turn data into actionable insights that can be used to make better decisions. Data Science is a rapidly growing field due to the increasing availability of data.

- With the advent of big data, organizations can now collect vast amounts of data from various sources

- Our program aims to produce the next generation of leaders in data science by emphasizing mastery of the skills needed to translate real-world data-driven problems in mathematical ones, and then solving these problems by using a diverse collection of scientific tools.

- In the decades to come, our ability to advance discovery, create new knowledge and provide insights that suggest solutions to the world’s most pressing problems will increasingly rely on our ability to learn from data.

Mission

Educate students in a field that has ushered in a once-in-a-generation revolution, comparable to the industrial revolution and the original computing revolution.

- Provide an environment for leading edge research that has a strong and rapid impact on the economy and that reestablishes New Jersey as a world leader in technological advancement.
- Establish a center of technology knowledge and a "go to organization" to service data creators, providers, managers, curators, and users of the State and the Nation.

Vision

The Department of Data Science is a trailblazer in the data revolution, tackling complex challenges while embracing unprecedented opportunities. With a vision to be a first-class academic institution, it aims to mold the next generation of data scientists through immersive education and cutting-edge research. Recognizing the dynamic nature of data science, the department instills a mindset of continuous learning, preparing students not just for today's challenges but for the ever-evolving landscape. Beyond the classroom, it aspires to address grand challenges, fostering collaboration and innovation. World-class research is at its core, driving intellectual curiosity and pushing the boundaries of data science. In essence, the department envisions itself as a hub of excellence, actively shaping the future of data science through education, research, and innovation.

Mr. K. BHARATH
ASSISTANT PROFESSOR
CSD

Data science has emerged as a critical tool for extracting valuable insights from the vast amounts of data generated in today's world. Our data science program provides students with the rigorous training and hands-on experience they need to become successful data scientists. I am continually impressed by the intellectual curiosity and problem-solving abilities of our students. They have tackled complex data analysis challenges with creativity and ingenuity, producing insightful solutions that have real-world applications

Data science has revolutionized the way we approach problem-solving and decision-making across various domains. Our data science program empowers students to become adept at extracting knowledge from data, transforming them into sought-after professionals in the industry.I am continually amazed by the passion and dedication our students bring to their studies. They have consistently demonstrated their ability to grasp complex concepts and apply them to real-world scenarios, producing innovative solutions that address critical challenges.

Mrs. D. KRANTHI DEEP
ASSISTANT PROFESSOR
CSD

Mrs. T. NAGA PRAVEENA
ASSISTANT PROFESSOR
CSD

Data science has become an indispensable tool for businesses and organizations seeking to gain a competitive edge. Our data science program provides students with the necessary skills and knowledge to harness the power of data and drive meaningful insights. I am incredibly proud of the accomplishments of our students. They have consistently demonstrated their ability to translate data into actionable insights, contributing to strategic decision-making and driving innovation within various organizations. The demand for skilled data scientists is growing exponentially, and our graduates are well-prepared to meet this demand.

Data science has revolutionized the way we interact with the world around us, providing a deeper understanding of complex phenomena. Our data science program empowers students to become experts in data analysis and visualization, enabling them to uncover hidden patterns and trends.I am continually impressed by the creativity and resourcefulness of our students. They have consistently demonstrated their ability to utilize various data analysis tools and techniques to produce insightful visualizations that effectively communicate complex information

Ms. M. NAGA SRAVYA
ASSISTANT PROFESSOR
CSD

Mr. A. MOHAIDEEN
ASSISTANT PROFESSOR
CSD

Data science has emerged as a powerful tool for addressing societal challenges and improving the lives of individuals. Our data science program provides students with the necessary skills and knowledge to apply data-driven solutions to pressing issues facing our communities. I am deeply inspired by the commitment and social responsibility demonstrated by our students. They have consistently shown a desire to use their data science skills to address real-world problems, such as improving healthcare outcomes, enhancing education systems, and promoting environmental sustainability.

Data science has transformed the way we approach scientific research, enabling groundbreaking discoveries and innovations. Our data science program provides students with the necessary tools and techniques to harness the power of data to advance scientific understanding.I am continually amazed by the ingenuity and problem-solving abilities of our students. They have consistently demonstrated their ability to apply datascience techniques to various research challenges, leading to groundbreaking discoveries and advancements in various scientific fields.The future of scientific research is inextricably linked to data science, and our graduates will play a crucial role in shaping this future.

Mrs. E. PAVITHRA
ASSISTANT PROFESSOR
CSD

DATA SCIENCE FACULTY

Mr. RADHAKRISHNAN
ASSISTANT PROFESSOR
CSD

Ms. P. AMULYA
ASSISTANT PROFESSOR
CSD

Mrs. K. PARIJATHA
ASSISTANT PROFESSOR
CSD

Mrs. B. SWATHI
ASSISTANT PROFESSOR
CSD

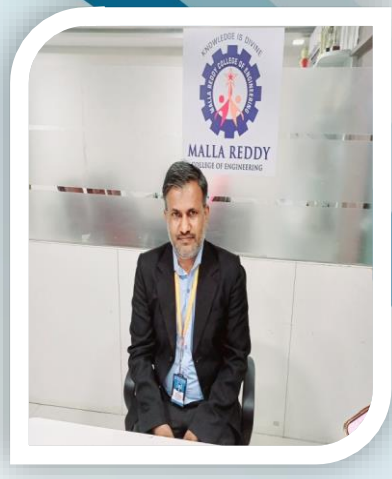
Mr. V. THARMALINGAM
ASSISTANT PROFESSOR
CSD

Mr. DEY AKASH
ASSISTANT PROFESSOR
CSD

DATA SCIENCE FACULTY

Mr. RAVI KUMAR
ASSISTANT PROFESSOR
CSD

Mrs. P. V. HARIKA
ASSISTANT PROFESSOR
CSD



Mr. R RAVI
ASSISTANT PROFESSOR
CSD

Mr. SAJIN R NAIR
ASSISTANT PROFESSOR
CSD

Mrs. K SRAVANTHI
ASSISTANT PROFESSOR
CSD

Mrs. MALA SHREE
ASSISTANT PROFESSOR
CSD

Mr. M RAJESH
ASSISTANT PROFESSOR
CSD

ELASTIC SEARCH

KORLA HARSHITHA
IV –YEAR

Elastic search, known for its efficient data storage, retrieval, and real-time capabilities, plays a pivotal role in facilitating Data Science tasks. Data Scientists often use Elastic search as a data source due to its rapid query and search abilities, particularly helpful when handling vast and diverse datasets. Elastic search support for aggregations and visualization is advantageous for Data Scientists, aiding them in generating insights and visual representations of data. Additionally, Elasticsearch's real-time capabilities are valuable for tasks like anomaly detection, a critical aspect of Data Science in domains like cybersecurity and fraud prevention. The seamless integration of Elasticsearch with various data science tools and libraries further enhances its relevance in the field

SAS (STATISTICAL ANALYSIS SYSTEM)

M CHANDU SEKHAR
IV –YEAR

SAS, short for "Statistical Analysis System," is a comprehensive and highly versatile software suite designed for data analysis, statistical modeling, and advanced analytics. With a rich history spanning several decades, SAS has evolved into a trusted and powerful tool that serves a broad range of industries. It excels in data management, statistical analysis, data visualization, and machine learning. SAS's capabilities extend to business intelligence, offering tools for reporting and creating interactive dashboards that empower data-driven decision-making. Furthermore, it possesses specialized features for text analytics, enabling users to glean insights from unstructured text data

NETWORK TRAFFIC ANALYSIS

I had the invaluable opportunity to explore the dynamic and ever-evolving field of Network Traffic Analysis (NTA). NTA is a crucial aspect of cybersecurity and network management, involving the monitoring and examination of data flowing through networks to detect anomalies, identify security threats, and optimize network performance.My internship focused on various aspects of NTA, including the collection and analysis of network traffic data using specialized tools and techniques. I was tasked with identifying patterns, understanding normal network behavior, and recognizing any deviations that might indicate security breaches, performance bottlenecks, or other issues.I also delved into the world of packet capture and analysis, learning to interpret network packets to uncover insights about network activity.

G LOKESH
IV –YEAR

FAKE NEWS DETECTION

I delved into the realm of fake news detection, a critical task in today's information-saturated world. My project aimed to develop a machine learning model capable of accurately identifying fabricated news articles.The project commenced with gathering a comprehensive dataset of labeled news articles, encompassing both genuine and fake pieces. This dataset served as the foundation for training our machine learning model.We employed a suite of natural language processing (NLP) techniques to extract meaningful features from the text content of each article. These features captured aspects such as writing style, sentiment, and the presence of sensational language, all of which are indicative of fake news..

B SHIVA NANDINI
IV –YEAR

WEB SCRAPING

Web scraping is an automatic method to obtain large amounts of data from websites. Most of this data is unstructured data in an HTML format which is then converted into structured data in a spreadsheet or a database so that it can be used in various applications. There are many different ways to perform web scraping to obtain data from websites. These include using online services, particular API's or even creating your code for web scraping from scratch. Many large websites, like Google, Twitter, Facebook, StackOverflow, etc. have API's that allow you to access their data in a structured format.Web scraping requires two parts, namely the crawler and the scraper. The crawler is an artificial intelligence algorithm that browses the web to search for the particular data required by following the links across the internet.

P SRINIVAS
IV –YEAR
DATA SCIENCE

ROBOTICS PROCESSING AUTOMATION (RAP)

P NEERAJ KUMAR
IV –YEAR
DATA SCIENCE

Robotic Process Automation (RPA) is a technology that uses software robots or "bots" to automate repetitive, rule-based tasks in business processes. These bots can mimic human actions, such as clicking, typing, and copying data, to interact with various software applications and systems. RPA has gained significant popularity in recent years due to its ability to improve efficiency, reduce errors, and cut operational costs . RPA can be applied to a wide range of industries and processes. In finance, it can automate invoice processing, data entry, and reconciliation. In healthcare, RPA can help with claims processing and appointment scheduling. It is also used in customer service to handle routine inquiries and in supply chain management for order tracking and inventory management

AUGEMENTED REALITY

Augmented analytics leverages AI and ML algorithms to automate and streamline data preparation, analysis, and visualization tasks. It reduces the need for manual data cleansing and modeling, allowing analysts and business users to focus on interpreting results and making data-driven decisions.One of the key components of augmented analytics is natural language processing (NLP).NLP enables users to interact with data through plain language queries, making it accessible to a broader audience within an organization. Users can ask questions like What were our sales last quarter and receive instant, context-aware responses.This approach also includes predictive and prescriptive analytics. Predictive analytics uses historical data to forecast future trends and outcomes .

B BHUVANA
IV –YEAR

FACEBOOK RECOMMENDATION

K SAI TEJA
IV –YEAR

A case study of Facebook's friend recommendation system provides insight into how the social media platform employs machine learning and data analysis to suggest potential friends for its users. Here's a overview:

OBJECTIVE**:** Facebook aims to enhance user engagement by connecting people with others they may know or have mutual connections with.

DATA SOURCES**:** Facebook gathers an extensive dataset, including user profiles, friend lists, interactions, and more. This data provides valuable information about user behavior and connections.

MACHINE LEARNING TECHNIQUES**:** Facebook's recommendation system employs a variety of machine learning

IRIS FLOWER CLASSIFICATION

I had the opportunity to work on a fascinating project involving the classification of iris flowers. This classic problem in the field of machine learning and botany involves categorizing iris flowers into three distinct species: Setosa, Versicolor, and Virginica, based on specific characteristics such as sepal length, sepal width, petal length, and petal width. My role in this project was to develop a robust and accurate classification model.To achieve this, I employed various machine learning techniques, including decision trees, support vector machines, and k-nearest neighbors. I preprocessed the data by normalizing and standardizing the features to ensure consistent and reliable results. Feature selection and dimensionality reduction techniques were also applied to enhance the model's performance.

R INDRA SENA REDDY
IV –YEAR

SPAM EMAIL DETECTION

K DURGA VEERENDRA
IV –YEAR

I had the privilege of working on a significant project in the domain of email security - spam email detection. The task was to develop a robust and efficient spam filter that could accurately identify and separate spam emails from legitimate ones, enhancing the overall email experience for users.To tackle this challenge, I delved into various machine learning and natural language processing techniques. I preprocessed the email data, extracting features such as email content, sender information, and metadata. I applied text analysis, including sentiment analysis and keyword extraction, to discern common characteristics of spam emails.

TIME SERIES FORECASTING

I had the privilege of gaining hands-on experience in the exciting field of Time Series Forecasting. Time Series Forecasting is a critical aspect of data science that involves predicting future data points based on historical time-ordered data. This particular area of data science plays a pivotal role in various industries, from finance and economics to supply chain management and weather forecasting.One of the highlights of my internship was working on projects that entailed the analysis and prediction of time-dependent data, such as stock prices, sales trends, or weather patterns. I had the opportunity to apply advanced techniques, including autoregressive models, moving averages, and state-of-the-art deep learning models like recurrent neural networks (RNNs) and Long Short-Term Memory networks (LSTMs).

J NAGA JYOTHI
IV –YEAR

SENTIMENT ANALYSIS

I had the privilege of delving into the dynamic and ever-evolving realm of Sentiment Analysis. Sentiment Analysis, also known as opinion mining, is a fascinating subfield of natural language processing (NLP) that involves evaluating and determining the sentiment or emotional tone expressed in textual data, such as customer reviews, social media posts, or news articles.One of the most impactful projects I worked on during my internship involved sentiment analysis for product reviews. This task was pivotal in helping businesses understand customer sentiments towards their products or services. I developed and fine-tuned machine learning models and NLP algorithms to automatically classify reviews as positive, negative, or neutral.

SAI CHARAN
IV –YEAR

AI IN EDGE COMPUTING

AI in Edge Computing is a cutting-edge technology that merges the capabilities of artificial intelligence (AI) with the power of edge computing to bring about transformative advances in data processing and decision-making. Edge computing involves processing data locally on devices or at the network's edge, rather than relying on centralized cloud servers. This approach reduces latency, enhances real-time analysis, and provides more efficient and secure data management. When AI is integrated into edge computing, it enables devices to make intelligent, autonomous decisions on-site, without the need for constant connectivity to the cloud.My experience with AI in Edge Computing during my internship was both enlightening and exciting. I had the opportunity to work on projects involving the development of machine learning models and algorithms tailored for edge devices, optimizing their efficiency and resource utilization.

K PAVAN SAI
IV –YEAR

HEALTHCARE PREDICTIVE MODELING

K SREE KEERTHI
IV –YEAR

Healthcare Predictive Modeling, a realm where data science plays a critical role in improving patient care, treatment outcomes, and healthcare system efficiency. Healthcare predictive modeling involves harnessing the power of data analytics and machine learning to forecast disease outcomes, patient readmissions, resource utilization, and various other healthcare-related parameters.One of the pivotal projects I contributed to during my internship was the development of a readmission prediction model. By analyzing vast amounts of patient data, we were able to predict which patients were at a higher risk of being readmitted to the hospital after their initial discharge. Such models not only aid in optimizing healthcare resources but also improve patient care by enabling early interventions and tailored post-discharge care plans.

DATA ANALYSIS

Data analysis is the process of inspecting, cleansing, transforming, and modeling data with the goal of discovering useful information, informing conclusions, and supporting decision-making.Data analysis has multiple facets and approaches, encompassing diverse techniques under a variety of names, and is used in different business, science, and social science domains

G YASHWANTH
20Q91A6737
IV YEAR

IBM (INTERNATIONAL)

S SRUTHIKA
IV YEAR

The IBM SkillBuild internship in data science focused on the "Restaurant Reviews" project. The goal was to analyze and extract insights from restaurant reviews using data science techniques. The team utilized natural language processing (NLP) to process and understand the sentiment and key themes in the reviews. They employed machine learning models to categorize reviews based on sentiment and topics.The project involved data cleaning, pre-processing, and feature engineering to enhance the accuracy of the models. Exploratory data analysis was conducted to identify trends and patterns within the review data. The team used Python-based tools like pandas, scikit-learn, and NLTK for the analysis

SPAM FILTER

Spam filters are essential tools for maintaining the integrity of email communication and preventing unwanted or malicious messages from reaching users' inboxes. My role in this project was to design, implement, and fine-tune a spam filter that could efficiently identify and classify incoming emails as either spam or legitimate.I began by exploring a wide range of techniques and algorithms, including rule-based filters, Bayesian spam filtering, and machine learning approaches. The primary challenge was to train the filter to recognize spam patterns and adapt to evolving spam tactics while minimizing false positives to avoid blocking legitimate messages. I utilized a vast dataset of labeled emails, featuring both spam and non-spam content, to train and validate the filter's performance. Data preprocessing, feature extraction, and model training played a crucial role in achieving high accuracy and robustness.

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K SAKETH
IV-YEAR

P AKHIL
IV-YEAR

BLOG WEBSITE AND APPLICATION

This project idea combines both the development of a dynamic website and a user-friendly mobile application, making it versatile for content creators and readers. With Full Stack Java,by implementinag this project, you can offer content creators a powerful tool to express themselves while delivering an engaging experience for readers, making it a valuable addition to your portfolio.

Network Traffic Analysis

N. SHIVA PRASAD
IV Year

I had the invaluable opportunity to explore the dynamic and ever-evolving field of Network Traffic Analysis (NTA). NTA is a crucial aspect of cybersecurity and network management, involving the monitoring and examination of data flowing through networks to detect anomalies, identify security threats, and optimize network performance.

My internship focused on various aspects of NTA, including the collection and analysis of network traffic data using specialized tools and techniques. I was tasked with identifying patterns, understanding normal network behavior, and recognizing any deviations that might indicate security breaches, performance bottlenecks, or other issues.

Forest Fire Prediction

V. DILIP REDDY
IV YEAR

Forest Fire Prediction. This project was not only intellectually engaging but also held the potential to make a substantial positive impact on our ecosystem. Forest fires are devastating natural disasters with far-reaching consequences for both the environment and human lives. My role in this project involved developing predictive models and tools that could help authorities and conservationists anticipate and mitigate the risks associated with forest fires. Using machine learning techniques, I developed predictive models that could estimate the likelihood of a forest fire outbreak in a specific area, taking into account a multitude of factors. These models provided valuable insights for early warning systems, resource allocation

NATURAL LANGUAGE PROCESSING

NLP is a subfield of artificial intelligence that focuses on the interaction between computers and human language. My primary task was to work on NLP projects that aimed to enhance language understanding and processing. This involved text classification, sentiment analysis, and language generation tasks. One of the standout projects I contributed to was sentiment analysis for customer reviews, where I developed a model to automatically classify reviews as positive, negative, or neutral. This technology has significant applications in market research and customer feedback analysis. I also had the opportunity to explore the world of language generation by building chatbots and text summarization algorithms, improving communication and information retrieval for users.

K.NIKHETHAN
IV Year

K SAHIL
IV YEAR

AUTONOMOUS CAR SIMULATION

Autonomous car simulation is a critical technology in the development and testing of self-driving vehicles. It involves creating virtual environments where autonomous vehicles can navigate and interact with various scenarios without real-world risks. In these simulations, the vehicles are equipped with AI algorithms and sensors that mimic real-world conditions, allowing engineers to validate and improve the vehicle's performance.Simulators like CARLA provide a platform for researchers and engineers to experiment with self-driving algorithms, test safety measures, and enhance the vehicle's decision-making capabilities.

FLUTTER DEVELOPMENT

Flutter is a free and open-source mobile application development framework created by Google. It allows developers to build high performance, high-fidelity, apps for iOS, Android, web, and desktop from a single codebase. The framework offers a rich set of pre-built widgets that can be customized to create beautiful and responsive user interfaces. Flutter uses the Dart programming language, which is easy to learn and has a syntax similar to Java and JavaScript. USES: cross-platform development Fast development Powerful UI

J SAI CHARAN
III YR
CSD-B

PROMPT ENGINEERING

Prompt engineering is the process of structuring text that can be interpreted and understood by a generative AI model. A prompt is natural language text describing the task that an AI should perform .A prompt for a text-to-text model can be a query such as "what is Fermat's little theorem?" a command such as "write a poem about leaves falling", a short statement of feedback or a longer statement including context, instructions and input data. . Prompt engineering may involve phrasing a query, specifying a style, providing relevant contextor assigning a role to the AI

D Chandana Sree
III YR
AI&DS

DATA VISUALISATION

Data visualization is the graphical representation of information and data. By using visual elements like charts, graphs, and maps, data visualization tools provide an accessible way to see and understand trends, outliers, and patterns in data. Additionally, it provides an excellent way for employees or business owners to present data to non-technical audiences without confusion. In the world of Big Data, data visualization tools and technologies are essential to analyze massive amounts of information and make data-driven decisions..

M.DEEPTHI
CSD -A
III year

ARTIFICIAL INTELLIGENCE

GAJULA SATHWIK
III YEAR
AI&DS

Artificial intelligence (AI) is the intelligence of machines or software, as opposed to the intelligence of humans or animals. It is also the field of study in computer science that develops and studies intelligent machines. "AI" may also refer to the machines themselves. Artificial intelligence was founded as an academic discipline in 1956.The field went through multiple cycles of optimism followed by disappointment and loss of funding, but after 2012, when deep learning surpassed all previous AI techniques there was a vast increase in funding and interest.

NEUROTECHNOLOGY

P THARUN
III YR
AI&DS

Neurotechnology, or neurotech, encompasses a range of technologies designed to interact with the human brain and nervous system. It includes brain-computer interfaces (BCIs), which enable direct communication between the brain and external devices, neuroimaging techniques for studying brain structure and function, and neural prosthetics that assist those with neurological conditions. Neurotech finds applications in healthcare, communication, research, and beyond. It's revolutionizing fields like assistive technology, rehabilitation, and even marketing. By understanding and manipulating the brain's activity, neurotechnology holds the promise of enhancing human capabilities and improving the treatment of neurological conditions. However, it also raises ethical concerns regarding privacy and consent.

SME

G.MADHUVAMSHI
III YR
CSD-B

The subject matter expert (SME) provides the knowledge and expertise in a specific subject, business area, or technical area for a project/program.-SME is a business with fewer than 250 employees The most common types of SMEs are sole proprietorships, partnerships, limited liability companies (LLCs), and S corporations.SMEs are often more adaptable and agile to situations than larger organisations due to their smaller nature

BUSINESS INTELLIGENCE(BI)

SAI KIRAN GOUTHAM
III YR
CSD-A

A business intelligence architecture includes more than just BI software. Business intelligence data is typically stored in a data warehouse built for an entire organization or in smaller data marts that hold subsets of business information for individual departments and business units, often with ties to an enterprise data warehouse. In addition, data lakes based on Hadoop clusters or other big data systems are increasingly used as repositories or landing pads for BI and analytics data, especially for log files, sensor data, text and other types of unstructured or semi-structured data…

METHYL GAS DETECTION

R.SURESH GOUD
III YR
AI&DS

Utilizing sensor technology, automatic detection Technology, communication technology and micro computer technology, to realize the operational parameter intelligent monitored management of entire mining area, this system occupies following characteristic a real-time data warning. The warning displays with kinds of representation. Using industry camera, it carries on image gathering and the remote control. With the growing innovations future work of this experimentation may include more development of the system by using other advanced sensors for monitoring .The underground threats. Also, all the underground operations can be carried out from the ground surface. New developing communication technologies can be used for highspeed data transfer in integration with smart sensors for sensing the mine conditions.

NANO TECHNOLOGY

Nanotechnology is an interdisciplinary field involving the design, synthesis, characterization, and application of materials at the atomic and molecular level. Nanoparticles are particles that have at least one dimension less than 100 nanometers. Nanoparticles have unique properties that make them useful for a variety of applications, including medicine, energy, and environmental science. Nanoparticles can be used to deliver drugs directly to diseased cells, reducing side effects and improving drug efficacy. Nanoparticles can be used to deliver cancer drugs and radiation directly to tumors, killing cancer cells while sparing healthy tissue.

G VENKATA KOUSHIK
III YR
AI&DS

OBJECT ORIENTED PROGRAMMING IN JAVA

T ALEKHYA
21Q91A6756
III YR CSD-A

Object-oriented programming (OOP) is a computer programming model that organizes software design around data, or objects, rather than functions and logic. An object can be defined as a data field that has unique attributes and behavior.Abstraction, encapsulation, polymorphism, and inheritance are the four main theoretical principles of object-oriented programming.

As the name suggests, Object-Oriented Programming or OOPs refers to languages that use objects in programming, they use objects as a primary source to implement what is to happen in the code. Objects are seen by the viewer or user, performing tasks assigned by you.Object-oriented programming aims to implement real-world entities like inheritance, hiding, polymorphism etc. in programming. The main aim of OOP is to bind together the data and the functions that operate on them so that no other part of the code can access this data except that function.

AUTOMOUS DRONES

In skies above, autonomous drones soar, With sensors keen, they navigate and explore. No human hands guide their aerial dance, As they fulfill tasks with precision's glance.From inspection heights to delivery's flight, Autonomous drones serve with unwavering might. Surveillance eyes watch from the cloud's embrace, While research ventures seek knowledge's chase.Their potential vast, their impact profound, Autonomous drones, a future unbound.

K SAI CHARAN
III YR
AI&DS

CAMERA MOTION SENSOR DETECTION

Camera motion sensor detection is a sophisticated technology that enables cameras to recognize and respond to movement within their field of view. These systems employ various methods to detect motion, including passive infrared (PIR) and ultrasonic technology. When motion is detected, the camera can trigger various actions, such as capturing images, recording video, or sounding alarms. This technology has wide-ranging applications, from home security systems to surveillance cameras in public spaces. It enhances security by alerting users to potential threats and providing valuable evidence in the event of incidents.

C SAI HRUSHIKESH
III YR
CSD-B

CYBER SECURITY SOLUTIONS

P ARUNA
III YR
CSD-A

Cyber security solutions encompass a diverse array of technological tools and services aimed at safeguarding organizations against the relentless threats posed by cyberattacks. These solutions are indispensable in protecting enterprise networks, critical data, and digital assets. They act as a robust defense against malicious actors who seek to compromise systems, leading to potential application downtime and data breaches. By employing cyber security solutions, organizations can proactively defend against external threats that could disrupt operations and compromise sensitive information. The significance of these solutions is paramount in today's digital landscape, where the ever-evolving threat landscape necessitates continuous vigilance and adaptation.

ANALYXING FOOD QUALITY WITH IMAGES

N C YASHASWINI
III YR
AI&DS

Analyzing food quality with images is a modern approach that harnesses the power of visual data to assess and ensure the quality of food products. This technique utilizes various image recognition and analysis methods to evaluate attributes such as color, texture, shape, and contaminants in food items. It plays a pivotal role in quality control, assisting in the identification of defects, ensuring consistency in food production, and meeting stringent industry standards. From detecting foreign objects in food to assessing ripeness and freshness, image analysis enhances food safety and consumer satisfaction.

GESTURE-CONTROLLED BLUETOOTH SPEAKER

I ROHITHA
III YR
CSD-A

·A gesture-controlled Bluetooth speaker is a cutting-edge audio device that allows users to interact with their music through hand gestures. This innovative technology leverages motion sensors, often in combination with Arduino, Raspberry Pi, or similar platforms, to detect and interpret gestures made by the user. By making specific hand movements, users can control various functions of the Bluetooth speaker, such as volume adjustment, track selection, and playback pause. This intuitive and hands-free approach enhances the user's listening experience by eliminating the need for physical buttons or smartphone control. Gesture-controlled Bluetooth speakers offer a futuristic and engaging way to enjoy music and audio content, making them a promising advancement in audio technology.

FRAUD DETECTION

G VARSHA
III YR
AI&DS

I spearheaded a comprehensive Fraud Detection project in the realm of Financial Transactions, successfully mitigating risks and fortifying security measures. Leveraging advanced machine learning algorithms, I designed a model capable of swiftly identifying anomalous patterns indicative of fraudulent activities within vast datasets of financial transactions. The model seamlessly integrated with existing transaction monitoring systems, providing real-time alerts and bolstering the institution's ability to preemptively respond to potential threats.My approach encompassed feature engineering, anomaly detection, and continuous model refinement to adapt to evolving fraud tactics. By collaborating with cross-functional teams, I ensured the model's seamless integration into the institution's operational workflow

DEEP LEARNING

K MANASA
III YR
CSD-A

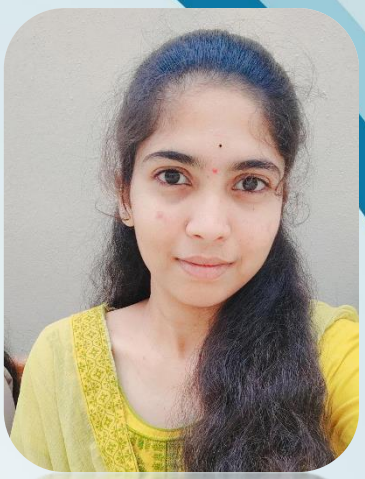
Deep learning is a subfield of machine learning concerned with algorithms inspired by the structure and function of the brain called artificial neural networks. Artificial neural networks have been used to solve a wide range of tasks that are difficult or impossible for traditional machine learning algorithms, such as image recognition, natural language processing, and machine translation.Deep learning algorithms are trained by feeding them large amounts of data, and they learn to identify patterns in the data that can be used to make predictions or decisions. For example, a deep learning algorithm can be trained on a dataset of images of cats and dogs, and it can learn to identify new images of cats and dogs with high accuracy.

FOREST FIRE PREDICTION

J RITHEESH
III YEAR
CSD

This project was not only intellectually engaging but also held the potential to make a substantial positive impact on our ecosystem. Forest fires are devastating natural disasters with far-reaching consequences for both the environment and human lives. My role in this project involved developing predictive models and tools that could help authorities andconservationists anticipate and mitigate the risks associated with forest fires. worked with a diverse range of data sources, including weather data, terrain information, historical fire incidents, and satellite imagery, to create a comprehensive dataset for training and validation.

3D VISUALIZATION



Data's essence, in 3D revealed, Patterns and trends, in vibrant hues unsealed. Scatter plots dance, in dynamic display, Complexities unraveled, in a numerical ballet.
Molecular structures, in vibrant attire, Unseen dimensions, brought forth with fire. Interactive landscapes, where users explore, Data's narrative, forevermore.
From genomic marvels to climate's grand stage, 3D visualization, a knowledge-rich page. Data's hidden beauty, in vivid embrace, Science's insights, in a visual space.

S HARSHITHA
III YR
CSD

STATISTICAL MODELING

Statistical modeling is the process of using mathematics to create a representation of a real-world phenomenon. This representation, or model, can then be used to make predictions about the phenomenon. There are many different types of statistical models, but they all share the common goal of using data to understand the world around us. Statistical models are used in many different fields, including business, finance, science, and engineering. They can be used to predict customer behavior, identify fraud, assess risk, and optimize processes. Statistical models are also used to develop new products and services, and to make decisions about how to allocate resources.

D PRASHANTH
III YR
CSD-B

BIOMEDICAL DATA ANALYSIS

Biomedical data analysis is the process of applying computational and statistical methods to extract meaningful insights from large and complex datasets generated by biomedical research and applications. Biomedical data analysis can help us understand the mechanisms of diseases, discover new biomarkers and therapies, and improve the quality and efficiency of health care. Biomedical data analysis requires interdisciplinary collaboration among experts from fields such as biology, medicine, computer science, mathematics, and engineering. Some of the current challenges and opportunities in biomedical data analysis include developing new algorithms and tools for data integration, visualization, interpretation, and sharing, as well as addressing ethical and legal issues related to data privacy and security.

J.JASWANTH
CSD-B
II YEAR

FINGERPRINT ENABLED VOTING

R ARAVIND
II YEAR
AI&DS

Implemented a system where voters' fingerprints are used for identification and verification.

A database is used to store registered voters' fingerprint data securely.by using fingerprint recognition algorithms and biometric authentication techniques to validate voters' identities. It is a user-friendly interface that allows voters to authenticate themselves using their fingerprints and cast their votes securely. Included the encryption and security measures to safeguard the fingerprint data and the integrity of the voting process. Evaluate and demonstrate the system's accuracy, security, and efficiency in handling a simulated voting scenario.

VOICE ENABLED ATM

This program allow the user to interact with the ATM using voice commands. Where users can able to check their account balance, withdraw funds, deposit money, and inquire about recent transactions by speaking to the ATM. Implemented voice recognition and synthesis it to enable this functionality. I use appropriate libraries and APIs for voice recognition and synthesis. This program is user-friendly and provides clear voice instructions and responses.

NUKALA SAI LIKHTIH
II YEAR
AI&DS

WEB DEVELOPMENT

D.HARISH REDDY
II YR
CSD-C

The process of creating a website for the Internet (also known as the World Wide Web) or an intranet (a private network) is called web development. Creating a basic static website with plain text to creating intricate web apps, electronic companies, and social network services are all examples of web development. This is the process of creating the content, interface, and design that a user sees and interacts with when they load an online application .Three codes are used to accomplish this: HTML, CSS, and JavaScript.

- **HTML** (Hyper Text Markup Language)
- **CSS** (Cascading Style Sheets)
- **JavaScript** is a scripting language that's widely used to add functionality and interactivity to web pages.

CLOUD COMPUTING

cloud computing means storing and accessing data and programs over he internet instead of your computer's hard drive. components:Client infrastructure, application, service, runtime cloud, storage, infrastructure, management and security all these are the components of cloud computing architecture. Software:Cloud-based software simply refers to any software program or application that's stored, managed, and available through the cloud. To access such services or software programs, users must have an internet connection. Uses:Cloud computing whether we like it or not is here to stay in one form or another. Everyday life activities such as Banking, Email, Media Streaming, and Ecommerce all use the Cloud. On the Business side, Applications, Infrastructure, Storage, and Sales/CRM all have their presence out in the Cloud.

RUBEENA SIDDIQI
AI-DS
II year

BRAIN COMPUTER INTERFACE

GAYATRI
AI-DS
II year

•Brain Computer interface (BCI) Brain-computer interfaces (BCIs) are devices that measure and interpret the brain activity of the user, using electrodes or sensors. Software : BCIS that determines functional intent - the desire to change, move, control, or interact with something in your environment - directly from your brain activity. Structure: BCI system consists of 4 sequential components: signal acquisition, feature extraction, feature translation, and device output. Uses: BCI acquire brain signals, analyze them, and translate them into commands that are relayed to output devices that carry out desired actions.

IMAGE BASED PLANT DISEASE DETECTION

This program is Build by using a deep learning model capable of analyzing images of plants to identify and classify various diseases they might be suffering from. I Utilized a dataset of labeled images containing healthy plants and different types of diseased plants and Implemented a convolutional neural network (CNN) architecture to train the model, allowing it to accurately classify and identify the specific diseases affecting the plants. Evaluated the model's performance by using appropriate metrics and provide a reliable method to predict diseases in plants based on input images.

S ROHITH
II YEAR
AI&DS

PROJECT MANAGEMENT TOOL

V PRANAV
II YEAR
AI&DS

Creating a Project Management Tool using Full Stack Java offers a powerful solution to streamline project planning, execution, and collaboration. This versatile application can enhance productivity and communication within teams, making it an essential asset for businesses and organizations. By harnessing the capabilities of Full Stack Java, developers can ensure robust backend functionality, coupled with an intuitive frontend interface. Key features may include project creation, task assignment, real-time updates, and reporting. Emphasize the significance of data security and scalability, ensuring the tool can adapt to growing project demands.

AGRICULTURAL YIELD PREDICTION

Agricultural Yield Prediction is a vital application in modern agriculture. By leveraging advanced machine learning and data analysis techniques, farmers and agricultural experts can make informed decisions about crop production. This involves estimating the expected yield for various crops, optimizing planting times, and choosing suitable crop varieties. The process typically relies on historical data, weather patterns, soil quality, and other relevant factors to create predictive models. These models empower farmers to plan efficiently, reduce resource wastage, and enhance overall agricultural productivity.

M.SANJANA
II YEAR
CSD-B

K. HIMASRI
II YEAR
CSD-B

SOCIAL MEDIA ANALYTICS

Social media analytics is the process of collecting, analyzing, and interpreting data from social media platforms to gain insights into audience behavior, brand perception, and campaign performance. It involves tracking key metrics such as follower growth, engagement rates, sentiment analysis, and influencer identification. By understanding these metrics, businesses can make informed decisions about their social media strategies, optimize their content, and improve their overall return on investment (ROI). Social media analytics is an essential tool for businesses of all sizes that want to effectively leverage the power of social media.

SMART HOME AUTOMATION

S. KARTHIK
II YEAR
AI&DS

Smart home automation, a rapidly growing field in the realm of technology and home improvement, represents the integration of advanced digital technologies into our everyday living spaces. In a smart home, various devices and systems are interconnected through the internet, enabling homeowners to remotely monitor and control them. This interconnectedness offers a myriad of advantages, such as enhanced convenience, security, energy efficiency, and overall quality of life. Smart homes often feature devices like smart thermostats, lighting systems, security cameras, and voice-activated assistants, all of which can be accessed and managed through mobile apps or voice commands.

K.SRIYA
II YEAR
AI&DS

THE SMART AR GIMMICK (MONOCOLE)

Technology that superimposes a computer generated image on a user's view of the real world, thus providing a composite perspective. It is adding layers of virtual objects to the real environment Monocole enables transferring photos using a app through encrypted Bluetooth The main traits of this gadget include Camera, Display, Microphone; for translating languages and acts as a virtual assistant. Cam can be operated to provide info of what we watch , GPS, Image tracking, and also Teleprompting The device contains primitive apps related to sports and workout To utilize it more conveniently one can login into its website and can be coded using python programming language.

OUR'S STUDENTS ACHIEVEMENTS

NSS MEMBER EDUCATING RURAL STUDENT'S

WINNER AT ELOCATUTION COMPETITON AT ISKCON – KILL CANCER

CERTIFICATE OF ACHIEVEMENT

OUR'S STUDENTS ACHIEVEMENTS

MERIT CERTIFICATE IN PAPER PRESENTATION

CERTIFICATION ON PAPER DEMONSTRATION

ACHIEVED MEDAL IN PAPER PRESENTATION

OUR'S STUDENTS ACHIEVEMENTS

INDUSTRIAL VISIT AT T- HUB

ISKON EVENT ON KILL CANCER

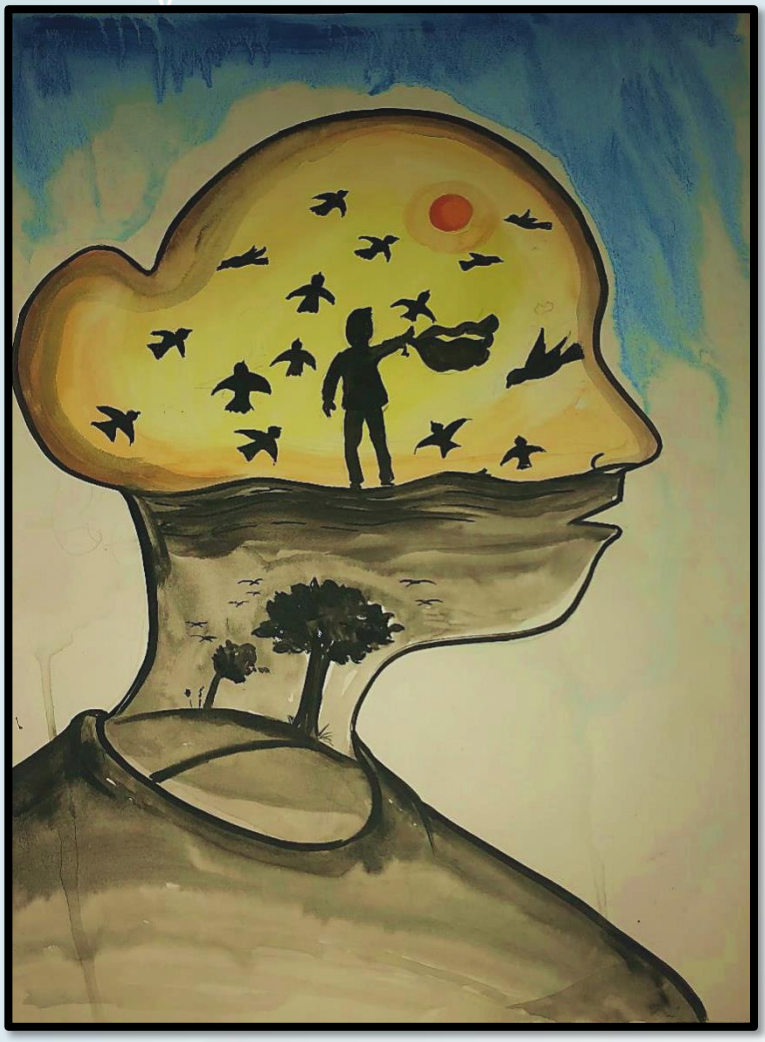
ISKON EVENT ON KILL CANCER

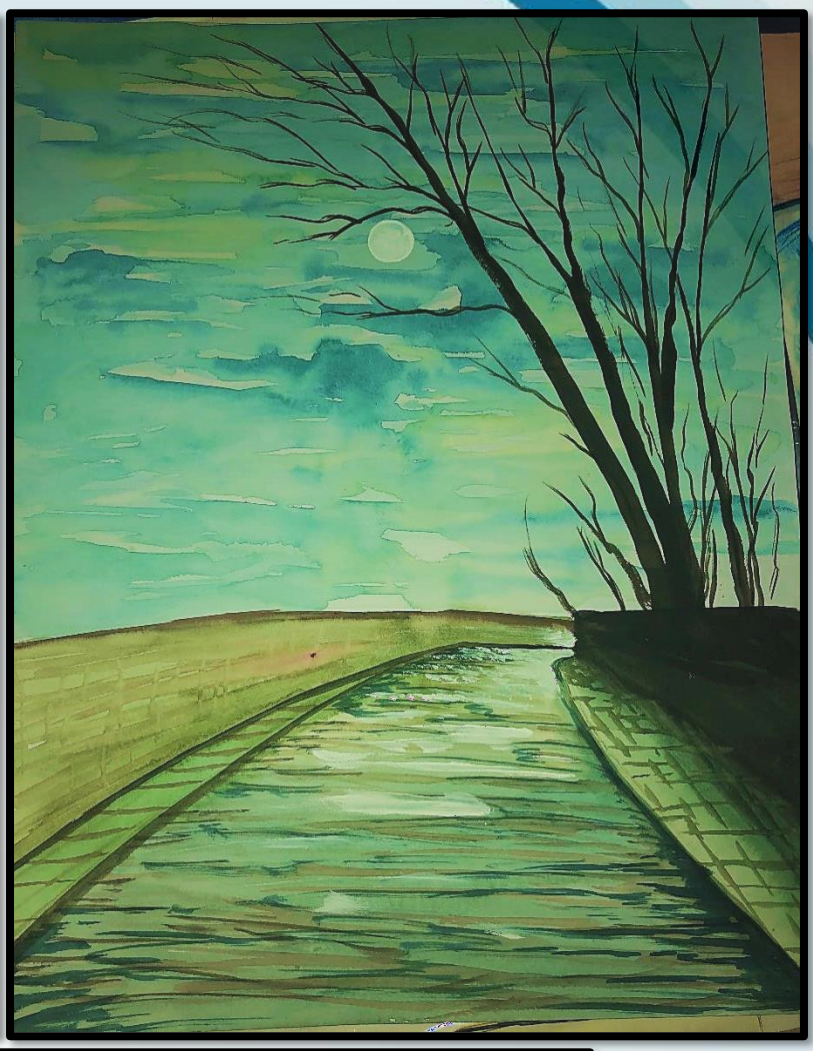
ORIENTATION DAY 2021

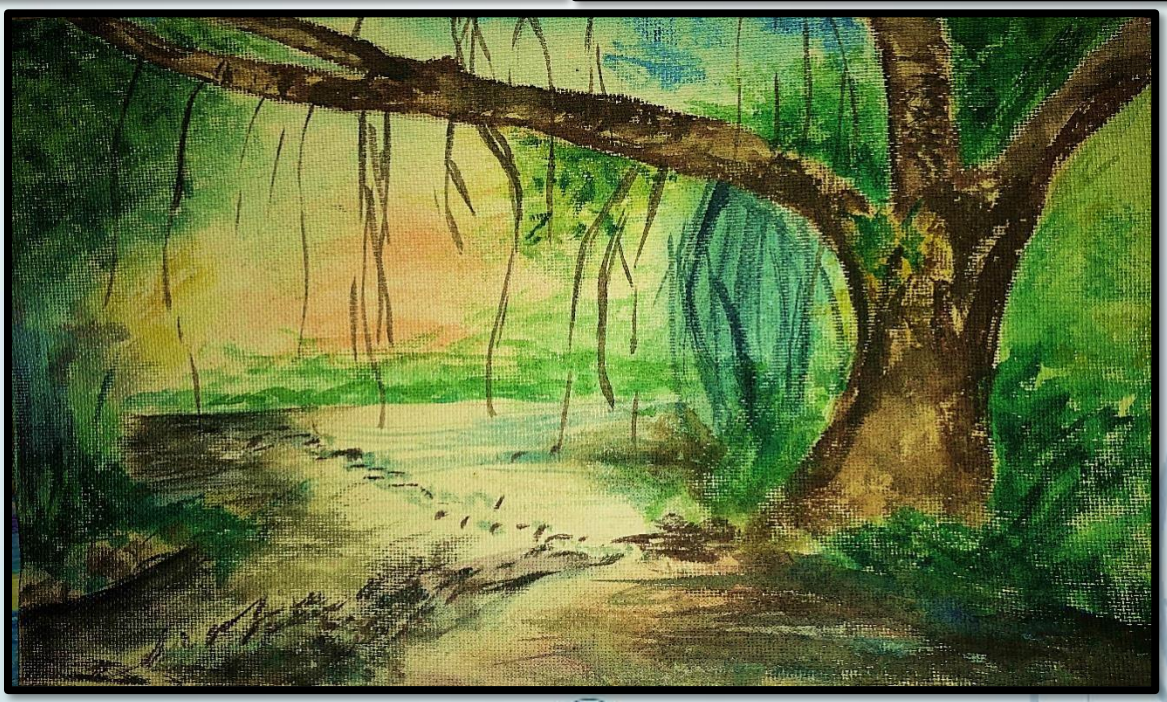
INTERNAL HACKATHON 2023

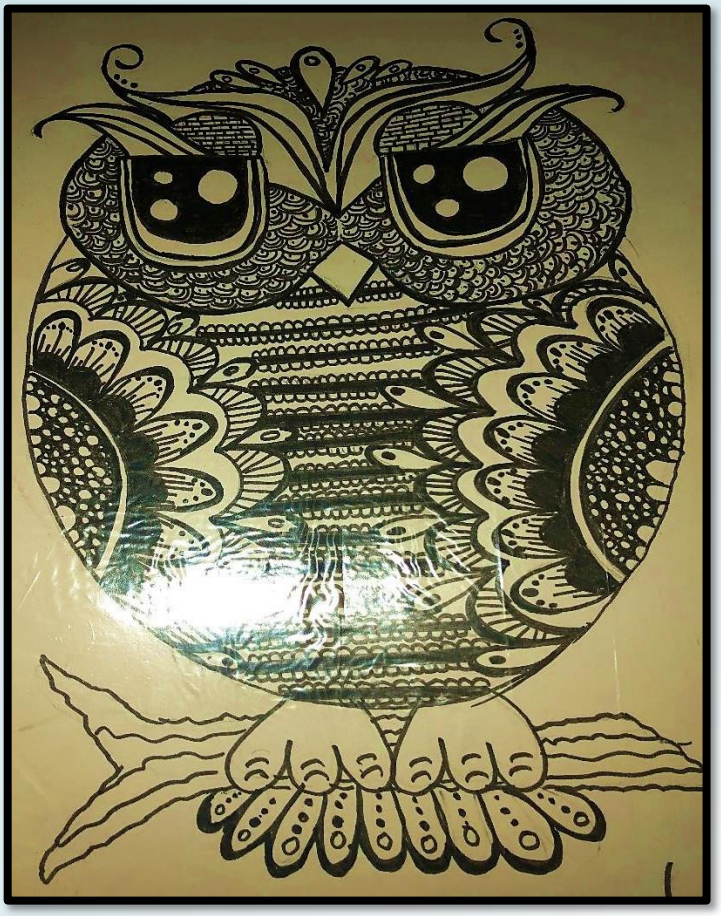
ACHIEVEMENT AT TECHNICAL FEST

ART WORK









By SRUTHIKA

ART WORK

- By M Sanjana

LIFE AT MRCE


MALLA REDDY
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24


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DEPARTMENT OF CSE-DS


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welcome to

THANK YOU