St. Thomas College of Engineering & Technology
Vellilode, Sivapuram PO. Mattanur. Kannur District, Kerala
Approved by AICTE New Delhi, Govt. Of Kerala and Affiliated to APJ Abdul Kalam Technological University

NATIONAL LEVEL TECH FEST

FIESTA 2K23

PRESENTED BY

Geekzone
COMPUTER SCIENCE AND ENGINEERING ASSOCIATION

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Dr. SHINU MATHEW JOHN

Principal, STM

MESSAGE

I am happy to know that the department of computer science and engineering is organizing a national level Technical Festival, Fiesta 2K23 from 27th to 28th April 2023 and releasing a souvenir as a part of this prestigious event. Technical Festivals have an important role in engineering education as they provide students with an opportunity to showcase their technical and non-technical skills and knowledge.

Beyond the theoretical knowledge, the students should undergo internships, project development and research activities to equip themselves as professionals in the industry. Through this event, students can have experimental learning, innovation, Networking, Exposure to new technologies, competition and career opportunities.

I would like to extend all support from the management and take this opportunity to appreciate all the participants, student and staff coordinators for their untiring efforts to make this event a great success.

Dr. SHINU MATHEW JOHN

Mr. RIJO JOSE THOMAS
CEO, STM

MESSAGE

It gives me immense pleasure to know that the Department of Computer Science and Engineering is releasing a Souvenir as part of the conduct of their department Tech Fest Fiesta 2K23.

At the offset let me appreciate the enthusiasm and effort of the students and faculty members of Department of Computer Science and Engineering who have contributed their best for this Souvenir. I pray that this Souvenir has provided a platform to showcase the immense hard work and efforts that has preceded the successful conduction of tech fest Fiesta 2K23.

The immediate need of the hour for engineering students is to unlock the potential of the theoretical knowledge that they earn from college into practical real-life applications that help immensely in making our world a better and sustainable place for us and for our future generations. This holds even greater significance in the field of Computer Science and Engineering as we currently live in a world whose pace is fuelled and is being fast tracked into the future based on latest trends in the field of Computer Science - Artificial Intelligence, Data Science and Machine Learning being some of these areas. It is highly imperative for engineering students to keep abreast of the latest technological trends that is evolving day by day and to transform themselves into being meaningful contributors going forward.

In this context, I pray that by the conduct of Fiesta 2K23, a considerable spark of interest has been ignited in the minds of our students and has enabled our students to realise and achieve greater purpose of their education as they slowly transform themselves from mere students to valuable members of the technological community.

Mr. RIJO JOSE THOMAS

Asst. Prof. AMITHA I C

Asst. Prof. & HoD CSE

MESSAGE

On behalf of the faculty members, staff, and students of St. Thomas College of Engineering and Technology, Mattanur, Kannur, I would like to welcome you all to the creative world of Computer Science and Engineering. CSE has been widely recognized as an essential source and technique for advancing human endeavours now and in the future. It is our great pleasure to organize a two-day National Level Technical Festival, 'Fiesta 2k23'. National level Technical Fest is always a powerful means of disseminating knowledge through discussions, that make our students competitive to contribute for nation building through technology. Congratulations to the organizers and participants, and I hope that we all learn a lot from these events as we prepare for the forthcoming impacts of computer technology on our lives.

I appreciate the dedicated efforts of faculty, staff members, and students of our department in organizing such an event to unite students on the same platform and disseminate knowledge.

I wish all success for the National Level Technical Fest.

ASST. PROF. AMITHA I C

ABOUT THE EVENT: FIESTA 2K23

St. Thomas College of Engineering and Technology is hosting the eagerly anticipated FIESTA 2k23, a technical fest, on April 27th and 28th conducted by GeekZone, Association of Computer Science and Engineering. This fest is an exciting opportunity for tech enthusiasts to demonstrate their skills and knowledge. Six intriguing events are planned, including a paper presentation competition, quiz competition, program debugging competition, coding competition, debate competition, and an entrepreneurship workshop. Participants can earn up to 84 activity points. This fest promises to bring together technology enthusiasts and experts from inside and outside Kerala, providing an excellent opportunity to showcase technological expertise.

LIST OF EVENTS

1. **IDEON-** Paper Presentation Event
2. **IRON OUT-** Debugging Contest
3. **TEXPLORE-** Technical Quiz
4. **CIPHERUP-** Coding Contest
5. **TECLASH-** Two-Person Team Debate
6. **WORKSHOP-** Innovation & Start-ups: Entrepreneurship as a career opportunity
7. **GAMING EVENTS**

ST. THOMAS COLLEGE OF ENGINEERING & TECHNOLOGY

VELLILODE,SIVAPURAM PO. MATTANUR,KANNUR DISTRICT,KERALA.

Approved by AICTE New Delhi, Govt. Of Kerala and Affiliated to APJ Abdul Kalam Technological University.

DEPARTMENT OF
COMPUTER SCIENCE AND ENGINEERING
IN ASSOCIATION WITH
GEEKZONE

FIESTA
2K23

27 & 28 APRIL 2023

NATIONAL LEVEL TECHFEST

OPEN FOR ALL BRANCHES

REGISTER NOW

WORTH 10K

WIN ATTRACTIVE CASH PRIZE

MAXIMUM ACTIVITY POINTS 84

DAY 1

1. IDEON [PAPER PRESENTATION]
2. TEXPLORE [QUIZ COMPETITION]
3. IRONOUT [DEBUGGING COMPETITION]

DAY 2

1. CIPHERUP [CODING COMPETITION]
2. TECLASH [DEBATE COMPETITION]
3. WORKSHOP

GAMING ACTIVITIES

SCAN ME

REGISTRATION LINK
WWW.STTHOMASKANNUR.AC.IN/FIESTA23/

CONTACT US

Staff coordinators:-
ASST PROF JITHIKA M :- 9526734873
ASST PROF VAISHAKHI V K:- 9495060854

Student coordinators:-
ABHINAV S:- 7025352698
ANUPAMA U:- 8943246025
SEVIN M:- 7306295569


FIESTA
2K23
Geekzone
EARN UPTO
10
ACTIVITY POINTS
REG FEE
₹150
27/04/2023
IDEON
PAPER PRESENTATION EVENT PROVIDES A PLATFORM FOR STUDENTS TO SHOWCASE THEIR IDEAS. PARTICIPANTS HAVE THE OPTION TO COMPETE EITHER INDIVIDUALLY OR AS A TEAM.
PRIZES WORTH ₹1.5k
SCAN TO REGISTER
STAFF COORDINATOR
ASST PROF AMITHA I C
90747 77986
STUDENT COORDINATOR
PRINCE RADHAKRISHNAN
83048 11606


FIESTA
2K23
Geekzone
EARN UPTO 6
ACTIVITY POINTS
REG FEE
₹50
27/04/2023
IRONOUT
A PROGRAM DEBUGGING COMPETITION THAT OFFERS COMPETITORS A CHANCE TO DEMONSTRATE THEIR TALENT FOR FINDING AND RESOLVING PROGRAMMING BUGS.REGISTER NOW AND GET READY TO IRON OUT THOSE PROGRAMMING ERRORS.
SCAN TO REGISTER
PRIZES WORTH ₹1.75K
STAFF COORDINATOR
ASST PROF SREEREKHA K P
7559036519
STUDENT COORDINATOR
AASHISH ANIL
9961308229


FIESTA
2K23
Geekzone
27/04/2023
REG FEE
₹200
EARN UPTO
50
ACTIVITY POINTS
TEXPLORE
A two-person team quiz competition event that allows competitors to demonstrate their knowledge in technology.
PRIZES WORTH ₹3K
SCAN TO REGISTER
STAFF COORDINATORS
ASST PROF ANU C
95623 12907
ASST PROF DINLA O K
97440 93662
STUDENT COORDINATOR
NABEEL NAZIR
9745501555


FIESTA
2K23
Geekzone
REG FEE ₹ 50
28/04/2023
EARN UPTO
6
ACTIVITY POINTS
Cipher Up
SCAN TO REG
A CODING COMPETITION WHERE PARTICIPANTS MUST COMPETE INDEPENDENTLY AND COMPLETE CODING CHALLENGES IN A SET AMOUNT OF TIME. THE PURPOSE OF THE COMPETITION IS TO EVALUATE THE COMPETITORS KNOWLEDGE OF VARIOUS PROGRAMMING LANGUAGES, ALGORITHMS AND DATA STRUCTURES. THE WINNERS WILL BE CHOSEN BASED ON THEIR PERFORMANCE AND THE SPEED AND PRECISION OF THEIR SOLUTIONS.
PRIZES WORTH ₹ 1.75k
STAFF COORDINATOR
ASST PROF MADHU K +91 9544872086
STUDENT COORDINATOR
RASI K P +91 9605942261


FIESTA
2K23
Geekzone
EARN UPTO
6
ACTIVITY POINTS
REG FEE
₹50
28/04/2023
TECLASH
A two-person team debate competition that offers a stage for teams to demonstrate their arguing abilities. The judges will choose the winners based on their ability to effectively communicate, make strong arguments, and deliver information. Register now and get ready to TeClash!
Prizes worth ₹1.75k
SCAN TO REG
STAFF COORDINATOR
ASST PROF DHANYAJA N
94957 43680
STUDENT COORDINATOR
ANIRUDH K
98473 71645


FIESTA
2K23
Geekzone
WORKSHOP
on Innovation &
Start-up:
Entrepreneurship as
a career opportunity
REG FEE
₹ 50
28/04/2023
UPTO 6 Activity Points
Dr. Muneer T K
Principal, CCMY
Dr. Raji Sukumar
Founder Director of
TECHTERN Pvt Ltd
SCAN TO REG
STAFF COORDINATOR
ASST PROF SARITHA NARAYANAN
94975 60920
STUDENT COORDINATOR
AMINA MALIHA
96338 92465


VALORANT
TOURNAMENT
OMEN
REG FEE:- 250₹
PRIZE AMOUNT:-
2K
27 | 28 APRIL
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WWW.STTHOMASKANNUR.AC.IN/FIESTA23/

ABOUT THE DEPARTMENT

Computer Science and Engineering department was established in the year 2014 with an intake of 60 students. This department has well-trained faculty, technical staff as well as students. The program is designed to equip students with the fundamental knowledge and practical skills to succeed in the challenging IT environment. The department has provided in-depth technical knowledge over the years. In order to provide students with industry exposure and context throughout their degree, the department has collaborated with global as well as local companies. To improve the skills of the students, the department has signed various Memorandum of Understandings (MoUs) to provide practical knowledge and internships.

Aspiring computer science students can share their views and ideas through the Computer Society of India (CSI), under the local chapter. A deep learning workshop was conducted for the beginners, along with the renewal of CSI membership with 82 second- and third-year students. The FOSS-Cell group plans to hold a workshop on GIT as well as certification programs in Python and Machine Learning. Special interest groups within the department promote research and development activities in Artificial Intelligence, Machine Learning, Computer Networks, and Security, and Python for Computer Science Engineers has been selected for the current academic year.

Students are placed every year through campus drives conducted by Infosys, Wipro, Capgemini, TCS, and many more. Some of our 2019-2023 batch students started their careers before finishing their courses. The department laboratory has been equipped with 1 high end server and 135 nodes of latest configuration. The department library consists of 24 titles with 159 volumes of books and various National, International Journals, Magazines and 160 E-journals.

Faculty Pursuing Ph. D.:

S. No.	Name of the Faculty	Research Area
1.	Asst. Prof. Amitha I C	Image Processing (Computer Vision)
2.	Asst. Prof. Madhu K	Image Processing using Deep Learning

FACULTY DETAILS

TEACHING STAFF:

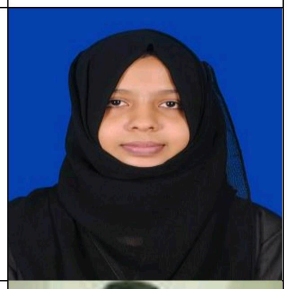
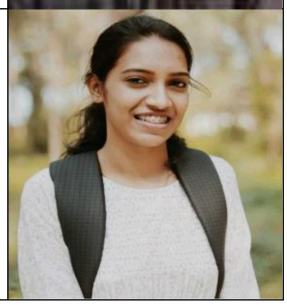
Sl. No.	Staff Name	Qualification	Designation
1.	Asst. Prof. Amitha I C	B. Tech, M. Tech, (Ph. D)	HoD- CSE
2.	Asst. Prof. Madhu K	B. Tech, ME, (Ph. D)	Assistant Professor
3.	Asst. Prof. Jithin S	B. Tech, M. Tech	Assistant Professor
4.	Asst. Prof. Anu C	B. Tech, M. Tech	Assistant Professor
5.	Asst. Prof. Dhanyaja N	B. Tech, M. Tech	Assistant Professor
6.	Asst. Prof. Dinla O K	B. Tech, M. Tech	Assistant Professor
7.	Asst. Prof. Sreerekha K P	B. Tech, M. Tech	Assistant Professor
8.	Asst. Prof. Saritha Narayanan	B. Tech, M. Tech	Assistant Professor
9.	Asst. Prof. Jithika M	B. Tech, M. Tech	Assistant Professor
10.	Asst. Prof. Anju G	B. Tech, ME	Assistant Professor
11.	Asst. Prof. Vaishakhi V K	B. Tech, M. Tech	Assistant Professor

SUPPORTING STAFF:

Sl. No.	Staff Name	Designation
1.	Mr. Amal Cheriyan	Lab Assistant
2.	Mr. Vikas Kumar P	System Administrator

CLASS TOPPERS

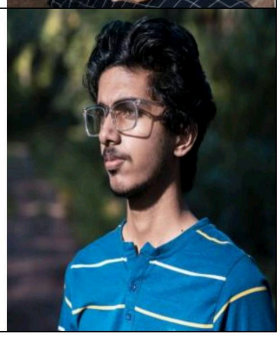
2017-2021 Batch

Student Name	Percentage/ CGPA	Rank	Photo
SHABNA N P	9.35	1	
MIDILAJ M A	8.42	2	
SARGARAJ T	8.34	3	

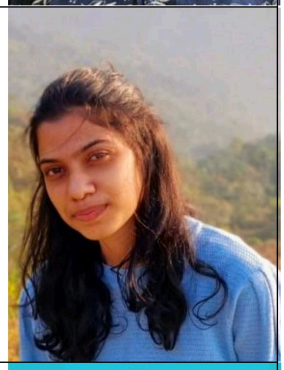
2018-2022 Batch

Student Name	Percentage/ CGPA	Rank	Photo
Fathimathul Masna	9.67	1	
Raiza Khalid	8.75	2	
Baby Sreeshma P K	8.67	3	

2019-2023 Batch

Student Name	Percentage/ CGPA	Rank	Photo
Thulasi K	8.35	1	
Nanda S Nair	8.03	2	
Rohith Rameshan	7.93	3	

2020-2024 Batch

Student Name	Percentage/ CGPA	Rank	Photo
Isha Sudhir	8.84	1	
Anjeetha Suresh	8.44	2	
Akarsh B	8.03	3	

2021-2025 Batch

Student Name	Percentage/ CGPA	Rank	Photo
Gopika Pradeep	8.74	1	
Sandra C M	8.64	2	
A K Rithul	8.47	3	

PLACED STUDENTS

Embarking the horizone with great placements...

1st joinee to the corporate world from 2019 -23 Batch.

We feel proud that our final year student Mhd MinhajMahroof had already started his career as React Native Developer @Woxro.

St. Thomas College of Engineering & Technology

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Congratulations!!!


MHD MINHAJ MAHROOF


SEVIN M


THULASI K


ABHINAV SELVARAJAN


AKHIL K


ANAINA SS


ANUPAMA U


AMINA MALIHA


ARPITH RAMESHAN


ASHWIN K


FASNA ABDUL LATHEEF


FATHIMA RAMSHADA


JAREESH ISMAIL CK


MIDHUN MOHAN

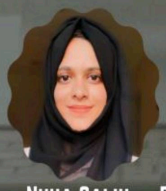

AASHISH ANIL


MHD RASI KP


MHD SALIH


NABEEL NAZIR


NIVEDYA KC


NUHA SALIH


PRINCE RADHAKRISHNAN


RISHIKESH PK


RISHWIN R KANTH


SAFEEL MUHAMMED


AISHWARYA P


THEJA PONON


ADITYA PP


NANDA S NAIR


SEJAL TP

2023 batch, Package offered from 1.8 to 7 LPA, Awaiting for more results...

WOXRO THINK BIG. WE MAKE IT POSSIBLE

Poornam Info Vision

MAVERIX

PLANETSPARK

Quest global

experion technologies

IntelliPaat

codilar

EY

GI CE

STUDENT CO-CURRICULAR ACTIVITIES

IV YEAR

Sl. No.	Name of student	Name of Event	Name of College Presented	Prize/Award
1.	Anirudh K	Workshop	STM	Attended
2.	Akhil K	Workshop	STM	Attended
3.	Rishwin R Kanth	Workshop	STM	Attended
4.	Aashish Anil	Workshop	STM	Attended
5.	Vyshna Pradeep	Workshop	STM	Attended
6.	Nivedhya K C	Workshop	STM	Attended
7.	Sevin M	Workshop	STM	Attended
8.	Amal Surendran	Workshop	STM	Attended
9.	Ashwin K	Workshop	STM	Attended
10.	Anooja V	Workshop	STM	Attended
11.	Nanditha P	Workshop	STM	Attended
12.	Thanusree Rajeevan	Workshop	STM	Attended
13.	Safeel Muhammed	Workshop	STM	Attended
14.	Nabeel Nazir	Workshop	STM	Attended
15.	Anaina S	Workshop	STM	Attended
16.	Midhun Mohan B	Workshop	STM	Attended
17.	Nanda S Nair	Workshop	STM	Attended

Sl. No.	Name of student	Name of Event	Name of College Presented	Prize/Award
18.	Anupama U	Workshop	STM	Attended
19.	Thulasi K	Workshop	STM	Attended
20.	Amal Raveendran	Workshop	STM	Attended
21.	Sishaj Sasi	National Level Seminar Series	SRISTI 2022	Attended
22.	Muhammed Rasi K P	National Level Seminar Series	SRISTI 2022	Attended
23.	Muhammed Minhaj Mahroof	National Level Seminar Series	SRISTI 2022	Attended
24.	Prince Radhakrishnan	National Level Seminar Series	SRISTI 2022	Attended
25.	Rheshikes P K	National Level Seminar Series	SRISTI 2022	Attended

III YEARS

Sl. No.	Name of student	Name of Event	Name of College Presented	Prize/Award
1.	Rajath P	Workshop	STM	Attended
2.	Ashwin Pavithran M	Workshop	STM	Attended
3.	Niveditha Shyjith T	Workshop	STM	Attended
4.	Punnya Pradeep E	Workshop	STM	Attended
5.	Gadha Krishna C H	Workshop	STM	Attended
6.	A K Gokul	Workshop	STM	Attended
7.	Abhinand C	Workshop	NIT CALICUT	Attended
8.	Akarsh B	Workshop	STM	Attended
9.	Nynika Sandeep	Workshop	STM	Attended
10.	Varshanath K M	Workshop	STM	Attended
11.	Anjeetha Suresh	Workshop	STM	Attended

Sl. No.	Name of student	Name of Event	Name of College Presented	Prize/Award
12.	Abhinav Sreenivas	Workshop	STM	Attended
13.	Ahila Saseendran	Workshop	STM	Attended
14.	V Pranav Madhu	Workshop	STM	Attended
15.	Sourav S	Workshop	STM	Attended
16.	Nirmal T V	Workshop	STM	Attended
17.	Sidharth Sunil	Workshop	STM	Attended
18.	Sreerej.M	Workshop	STM	Attended
19.	Shonin Selvaraj	Workshop	STM	Attended
20.	Neha Fazal	Workshop	STM	Attended
21.	Albin Thomas	Workshop	STM	Attended
22.	Arunima P	Workshop	STM	Attended
23.	Sidharth Preman	Workshop	STM	Attended
24.	Anujith V K	Workshop	STM	Attended
25.	Agna P	Workshop	STM	Attended

II YEARS

Sl. No.	Name of student	Name of Event	Name of College Presented	Prize/Award
1.	Nasla Safiya	Workshop	STM	Attended
2.	Jishnu Saj	Workshop	STM	Attended
3.	Albin Binu	Workshop	STM	Attended
4.	Drupad M K	Workshop	STM	Attended
5.	Abhinav V P	Workshop	STM	Attended

Sl. No.	Name of student	Name of Event	Name of College Presented	Prize/Award
6.	Ashith K P	Workshop	STM	Attended
7.	Theja Murali	Workshop	STM	Attended
8.	Anand K	Workshop	STM	Attended
9.	Ahin Suresh	Workshop	STM	Attended
10.	Nihel Vinod	Workshop	STM	Attended
11.	Ayisha Zoomi	Workshop	STM	Attended
12.	Fathima Fiza	Workshop	STM	Attended
13.	Rena Haris	Workshop	STM	Attended
14.	Anjana Pramod K	Workshop	STM	Attended
15.	Drishya P K	Workshop	STM	Attended
16.	Hridya Raj P	Workshop	STM	Attended
17.	Nandana V K	Workshop	STM	Attended
18.	Sneha Ajith	Workshop	STM	Attended
19.	Abhinaya K	Workshop	STM	Attended
20.	Anamika K	Workshop	STM	Attended

STUDENT EXTRA-CURRICULAR ACTIVITIES

IV YEARS

Sl. No	Name of Student	Name Of Event	College/ Zonal Level	Name Of College Organized
1.	Vyshna Pradeep	Athletics	College	STM
2.	Mohammed Nasif K	Kabaddi, Volley Ball	College, Zonal	STM, CETKR
3.	Yadav Jagadeesh	Kabaddi, Hand Ball	College, Zonal	STM, CETKR
4.	Rithik Sunil	Athletics	College	STM
5.	Mariyam Liyana C P	Badminton	College	STM
6.	Anupama U	Chess, Badminton	Zonal	VJEC, GECK
7.	Kadeeja Shirin	Athletics, Hand Ball	College, Zonal	STM, CETKR
8.	Rohith Rameshan	Football	College	STM
9.	Nuha Salih	Table Tennis	College	STM
10.	Sishaj Sasi	Carroms	College	STM

III YEARS

Sl. No	Name of Student	Name Of Event	College/ Zonal Level	Name Of College Organized
1.	Ashwanth Anilkumar	Football, Hand Ball	Zonal	GCEK, GCK
2.	Abhinav Sreenivas	Football, Hand Ball	Zonal	GCEK, GCK
3.	Sourav S	Cricket	Zonal	GCEK
4.	Nirmal T V	Cricket	Zonal	GCEK
5.	Sreerej M	Football	College	STM
6.	Shanil K	Football, Volleyball	College	STM
7.	Muhammed Fahad V K P	Football	College	STM
8.	Rajath P	Cricket	College	STM
9.	Ashwin K	Cricket	College	STM

Sl. No	Name of Student	Name Of Event	College/ Zonal Level	Name Of College Organized
10.	Muhd Sahal A K	Football	College	STM
11.	Muhd Sadheef P M	Cricket	college	STM
12.	Ajal Prem.	Cricket	college	STM
13.	Akarsh B	Cricket	College	STM
14.	V Pranav Madhu	Football	Zonal	GCEK
15.	Anurag K	Kabbadi	College	STM

II YEARS

Sl. No	Name of Student	Name Of Event	College/ Zonal Level	Name Of College Organized
1.	Ayush Sunil Kumar E K	Cricket	Zonal	GCEK
2.	Nihel Vinod	Cricket	Zonal	GCEK
3.	Akash M	Football	Zonal	GCEK
4.	Sivanth P K	Chess, Badminton	Zonal	GCEK,VJEC
5.	Ashith K P	Volleyball	College	STM
6.	Drupath M K	Volleyball	College	STM
7.	Ahin Suresh	Volleyball	College	STM
8.	Anjana Pramod k	Athletics	College	STM
9.	Vyshagh C	Badminton	Zonal	GCEK
10.	A K Rithul	Cricket	College	STM
11.	Amarnath T	Cricket	College	STM

PAPER PRESENTATION ABSTRACTS

REVIEW ON VARIOUS METHODS OF E-VEHICLE CHARGING

A solenoid engine that substitutes for fuel combustion in internal combustion engines and electric motors in electric vehicles by driving the engine with the assistance of a solenoid actuator. This engine is same like other combustion engine where the cylinder of the engine is substituted by a solenoid and piston as a magnet to the electric motor in an electric vehicle to compensate for its various losses and prevent rapid battery drain. Hence the continuous movement of the magnetic piston in the solenoid cylinder can continuously generate power. It runs just like a regular gasoline engine, but the battery is now the power source, which doesn't produce any emissions and is good for the environment. In this review paper discussed the various methods of E-Vehicle battery charging and different parameters considered to improve the efficiency of solenoid engine for powering the E-Vehicle.

PRESENTED BY :

C. Vijayakumar

V. Indumathi

Arjun K

Muhammed Farooq V R

Sidharth Manoj

Department of Mechatronics Engineering K S Rangasamy College of Technology, Tiruchengode

DESIGN AND FABRICATION OF SOLENOID POWER SUPPLY FOR E-VEHICLE BATTERY CHARGING

In this, we study a solenoid engine which drives the engine with the help of the solenoid actuator in place of combustion of fuel as such in internal combustion engine and electric motor in electric vehicle. Basically this engine works on the principle of electro-magnetism. With the help of electromagnetism principle we have decided to drive the engine and provide an alternative to electric motor in electric vehicle to compensate its various losses and avoid drainage of battery with a quick rate. It works like a normal fuel engine but now power source is battery with is totally pollution free and eco-friendly. A solenoid is a type of electromagnet when the purpose is to generate a controlled magnetic field. In engineering, the term may also refer to a variety of transducer devices that convert energy into linear motion. The term is also often used to refer to a solenoid valve, which is an integrated device containing an electromechanical solenoid which actuates either a pneumatic or hydraulic valve, or a solenoid switch, which is a specific type of relay that internally uses an electromechanical solenoid to operate an electrical switch.

The operation of solenoids is based on conversion electrical energy into mechanical energy, and therefore solenoids are being considered as electromechanically actuators. Normally, the coil is a copper wire wound a tiny pitch and placed in a metal (iron based material) case, also known as a C-frame. The C-frame is a supporting structure that also contributes to the magnetic field produced by the coil. Applying an electric current to a solenoid coil generates a magnetic fieldor flux with intensity proportional to the current. The magnetic field pulls the plunger in. Pulling the plunger inside closes the air gap and intensifies the field concentration inside the solenoid.

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SURVEY ON CROP RECOMMENDATION FOR PROFITABLE FARMING USING MACHINE LEARNING

This paper outlines the development of a survey paper on the use of machine learning, specifically the random forest algorithm and convolutional neural networks (CNN), to create a crop recommendation system for the analysed soil. Agriculture is a significant contributor to the Indian economy, but farmers in the country face numerous challenges that make informed decision-making difficult. The system seeks to address these challenges by providing data-driven recommendations on crop selection and management. By analysing crop images using historical and real-time sensor data, the CNN model can accurately predict crop yield and profitability. The random forest algorithm will then refine these predictions to provide more accurate recommendations. Implementation of this system has the potential to lead to increased crop yields, profitability, and a more sustainable and efficient agricultural industry in India.

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SURVEY ON PROVIDING SECURITY TO MEDICAL IMAGES

With the outspread of computer networks in the healthcare industry, the techniques like telehealth have got more advancements. There is a need to exchange medical images through the public network which isn't safe. Securing these images in order to keep their integrity and confidentiality is one of the challenges in the contemporary world. Several papers have proposed for the purpose of providing security to medical images, encryption and steganography are the two conventional methods used for this. The encryption has been done using one-time pad algorithm,pixel permutation , AES algorithm and by performing xor-operation using key image . Steganography has been done using lsb method .Another approach is by implementing both encryption and steganography.This is done by first encrypting the medical image using a key which is then hidden in another image using LSB steganography. Various formats of images have been considered such as DICOM, TIFF, BMP, and JPEG.

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EMOTION RECOGNITION

Over the last few years, there has been an increasing number of studies about facial emotion recognition because of the importance and the impact that it has in the interaction of humans with computers. With the growing number of challenging datasets, the application of deep learning techniques have all become necessary. In this paper, we study the challenges of Emotion Recognition Datasets and we also try ‘ different parameters and architectures of the Conventional Neural Networks (CNNs) in order to detect the seven emotions in human faces, such as: anger, fear, disgust, contempt, happiness, sadness and surprise. We have chosen iCV MEFED (Multi-Emotion Facial Expression Dataset) as the main dataset) as the main dataset for our study, which is relatively new, interesting and very challenging. The proposed system can also detect age and gender by using a pretrained CNN model as a feature extractor and fully connected layers to classify the age and gender of the face.

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REAL-TIME WEAPON DETECTION SYSTEMS: A REVIEW OF DEEP LEARNING ALGORITHMS AND DATASETS FOR PUBLIC SAFETY AND SECURITY

The use of computer vision to detect weapons has become very important for keeping the public safe. This article talks about three different studies that have created systems using advanced computer algorithms, like YOLO, SSD, Faster-RCNN, VGGNet-19, and Inception models, to detect weapons in real-time. The studies used a variety of datasets, such as pre-labelled images, footage from security cameras, and information from the Internet Movies, Firearms Database, to accurately detect firearms and other weapons in live video streams. These new systems are expected to make public areas safer by identifying potential threats and alerting authorities in case a weapon is detected.

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MACHINE LEARNING APPROACH FOR BIRD DETECTION FROM VIDEO

This study proposes a novel approach to detect birds in video recordings using machine learning techniques. The method involves first extracting key features from video frames, including colour histograms and edge density, and then training a convolutional neural network (CNN) to classify these features into bird and non-bird categories. The CNN was trained on a large data set of video recordings containing various bird species and achieved a high accuracy rate of 94 percent on a test set of previously unseen videos. Use of grey scale formats from images were used to generate autograph. These autographs calculate the score sheet for each node and predicts respective bird species. The proposed approach has the potential to improve bird monitoring and conservation efforts by automating the detection process and reducing the need for manual identification. Overall, machine learning-based bird detection from video shows promise as a reliable and efficient method for ecological monitoring and research. By automating the bird detection process, it can save time and resources and provide valuable data on bird populations and behaviour.

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TRAFFIC SIGN BOARD DETECTION AND VOICE ALERT SYSTEM: A REVIEW ON DEEP LEARNING ALGORITHMS FOR ROAD SAFETY

Traffic sign board detection and voice alert system is a technology that aims to increase road safety by detecting and recognizing traffic signs in real-time, and notifying drivers through a voice alert system. The technology involves the use of computer vision techniques, such as image processing, pattern recognition, and machine learning algorithms such as CNN, to detect and classify traffic signs. The system can detect various types of signs, including speed limit signs, stop signs, yield signs, and pedestrian crossing signs, among others. Once a sign is detected, the system generates a voice alert to notify the driver of the sign's presence, location, and meaning, thereby helping them to make informed decisions while driving. The traffic sign board detection and voice alert system has several advantages, including reducing the risk of accidents caused by driver distraction or fatigue, improving driver awareness of the road environment, and promoting safe driving behaviour. The system can also be used to assist drivers in unfamiliar areas, such as when traveling in a new city or country. Furthermore, the system can be integrated with other advanced driver assistance systems, such as lane departure warning, adaptive cruise control, and collision avoidance systems, to provide a more comprehensive and reliable safety solution for drivers.

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SURVEY ON SIMULATION OF IOT SMART BUILDING AND TEMPERATURE MONITORING USING PACKET TRACER

In this work, we had proposed a smart building system using Cisco packet tracer software for providing many services such as lighting, HVAC, security, Fire/ gas alarms and suppression, and smart park which all can be controlled via internet using a IoT server webpage or using static IP address of the Server through smartphone or laptop from any corner of the world. Cisco Packet Tracer is a simulation tool designed to create and test network architecture before creating or testing an Embedded System. Programming for configuring the sensors, gateway devices are done with the JavaScript and Python programming Language. This paper also analyses the proposed security framework and how such an implementation on using various sensors which enables us to enhance the security and safety. By using sensors to monitor temperature levels, the system can adjust cooling and heating settings as needed to maintain a comfortable temperature for occupants. Experiments proved that cisco packet tracer is a perfect method to construct functional simulations for IoT. New features like Temperature Monitoring System are introduced in this paper.

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SURVEY ON DISEASE DETECTION IN BASIL LEAF USING IMAGE PROCESSING

In this survey all three papers use deep learning techniques to identify plant diseases, and they use different approaches to achieve high accuracy in disease detection. The first paper uses a convolutional neural network (CNN) to classify plant leaf diseases and achieved an accuracy of 98.29 percentage for training and 98.029 percentage for testing. The second paper uses GoogLeNet inception model and Rainbow concatenation to improve the feature fusion performance for detecting five types of disease in apple leaf, achieving an accuracy of 78.80 percentage mAp on ALDD with a high detection speed of 23.13 FPS. The third paper uses a Faster DR-IACNN model to detect four common grape leaf diseases effectively and accurately with an obtained accuracy of 81.1 percentage mAp and a detection speed of 15.01 FPS.

All three papers used data augmentation technology to generate more images to improve the accuracy of their models. The models used are fully capable of detecting real-time plant diseases accurately and efficiently, providing an accurate and efficient means of identifying plant diseases.

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REVIEW ON CLASSIFICATION OF DIABETIC RETINOPATHY METHODS

This review aims to develop a machine learning model to automatically classify retinal images into different stages of diabetic retinopathy. Diabetic retinopathy is a leading cause of blindness in working age adults, and early detection and treatment are essential for preventing vision loss. The proposed model will use a convolutional neural network (CNN) architecture to extract features from retinal images and classify them into normal, mild, moderate, severe, and proliferative stages of diabetic retinopathy. The model will be trained and evaluated on publicly available datasets of retinal images. We expect result of this mini-project will provide valuable insights into the development of automated tools for diabetic retinopathy screening and diagnosis, which can help to improve the accessibility and efficiency of healthcare services. Segmentation, classification and assessment of UW OCTA images for the diagnosis of diabetic retinopathy use UNet++ for segmentation and Resnet for classification. A deep learning model for identifying diabetic retinopathy using OCTA identify referable status with a CNN model. Transformer based architectures are particularly suited for image classification tasks as they can effectively capture long-range dependencies between image features. The model can be used to classify new retinal images into different stages of diabetic retinopathy with high accuracy.

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SURVEY ON LIBRARY BOOK LOCATOR SYSTEM USING GIT: GENERATIVE IMAGE TO TEXT TRANSFORMER

Libraries are an invaluable resource that provides access to vast amounts of knowledge and information, catering to a diverse range of ages and backgrounds. However, the process of locating specific books can be a hideous task that requires significant manual effort. In this survey paper, we describe about a library book locator system utilizing a generative image-to-text transformer, a powerful deep learning model that unifies vision-language tasks such as image captioning and question answering with generation-based image classification and scene text recognition. Using this technology, the system can provide the location and position of the desired book with ease, ultimately enhancing the library experience for all users. Similar methods include pixel-BERT which works by aligning image pixels with their corresponding textual descriptions. Unlike BERT-based models, the UniVLP model unifies the encoder-decoder and has single model architecture. Visual clues defines an approach for generating a descriptive paragraph caption for an input image.

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SURVEY ON ECZEMA DISEASE CLASSIFICATION USING EFFICIENTNET ARCHITECTURE

Eczema is a common skin condition that affects millions of people world-wide. There are several types of eczema, including Asteatotic Eczema, Chronic Eczema, Hand Eczema, Nummular Eczema, and Subacute Eczema. Accurate classification of eczema is essential for effective treatment. Although there are many existing methods for classifying eczema, their accuracy is often limited. In this survey, we define a deep learning approach for classifying five types of eczema using the EfficientNet architecture. Similar methods like image processing include an automatic eczema detection and severity measurement to classify the identified region as mild or severe based on image colour and texture feature. Another method EczemaNet for evaluating eczema severity directly from camera images. Other method includes the Automatic SCORAD, an automatic version of the SCORAD that measure AD severity by analysing skin lesion images.

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HEALTH MONITORING SYSTEM USING IOT WITH MACHINE LEARNING

The Internet of Things (IoT) is an emerging technology drastically improving with many new enhancements in medical and health domains. Using health wearable devices, in/out patients' health status can be monitored periodically and regularly. This project introduces an IoT application framework E-Healthcare Monitoring System (EHMS) integrated with Machine learning (ML) techniques to design an advanced automation system where we collect the patient's data using sensors which are later compared using machine learning and then we check if the patient is having diabetes or not. Using this data we also try to predict the percentage chances of kidney failure in a person due to uncontrolled diabetes. It helps to detect kidney failure at an early stage.

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A SURVEY ON CAR PARKING LOT MANAGEMENT SYSTEM USING AI

Traffic congestion is a major problem that we are facing nowadays. The task of finding a parking spot requires human efforts and it is time consuming. This survey conveys the information about the car parking lot management system using deep learning to detect the vacant and occupied spaces in the parking lot. It also gives‘ the count of available and occupied spaces. In this survey the system takes frames from video of the parking lot. Mask RCNN is used to detect cars. The system uses DNN algorithm which is proposed for image processing in parking areas. The algorithm uses online pre-processing and an initial configuration to detect parking space occupancy through the occupancy of vehicles and visualisation of free parking spaces. It uses tensor flow deep neural network and YOLOv4 and deep sort tech nique. The approach uses web interface for visualisation and transfer learning to train the model.
This approach is designed to have its highest performance over a busy parking lot during the busiest time and also reduces human efforts.

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SURVEY ON ADAPTIVE TRAFFIC LIGHT CONTROL USING MACHINE LEARNING

This system utilizes CCTV cameras positioned at traffic junctions to capture images for real-time traffic density calculations using image processing and object detection. The system consists of three modules: The Vehicle Detection module, Signal Switching Algorithm, and Simulation module. The Vehicle Detection module employs the YOLO algorithm to identify vehicles of different types, such as cars, bikes, buses, trucks etc. The number of vehicles in each class is determined to calculate traffic density. The Signal Switching Algorithm uses this density, along with other factors, to adjust the green signal timer for each lane and update the corresponding red signal times. To prevent a particular lane from being neglected, the green signal time is constrained within a maximum and minimum value. Additionally, a simulation is developed to showcase the system's efficacy and compare it with the existing static system.
In another approach fuzzy logic control system can be used to implement this system . In addition to Fuzzy logic , Artificial neural network prediction can be used to improve this system.

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SURVEY ON CHRONIC KIDNEY DISEASE DIAGNOSIS

This study aims to predict the different stages of Chronic Kidney Disease (CKD) using machine learning classification algorithms. CKD is a life-threatening disease that progresses in six stages according to the severity level. The study uses a dataset obtained from medical records of affected people and develops a CKD diagnosis model using the XGBoost algorithm. The algorithm is trained using a cross-validation approach to optimize its hyperparameters, and its performance is evaluated based on accuracy, sensitivity, and specificity. The findings of this study will provide insights into the potential of machine learning algorithms in improving the accuracy of CKD diagnosis and may pave the way for further research in this field. Various machine learning techniques, such as Decision Tree and SVM, will be utilized to build a model with maximum accuracy in predicting CKD and its severity.

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SURVEY ON DRIVER DROWSINESS DETECTION FRAMEWORK

The detection of driver drowsiness is crucial for preventing road accidents caused by fatigue or drowsiness. In recent years, computer vision techniques have gained popularity for developing driver drowsiness detection systems. The ”you only look once” (Yolo) object detection framework is one of the most successful and widely used techniques. This paper proposes a novel framework for driver drowsiness detection that combines vision transformation and YoloV5 object detection. Here the input image is transformed to grayscale, applies a series of image processing techniques to highlight the eyes and facial expressions, and uses YoloV5 to detect the eyes and facial expressions to determine the level of drowsiness based on their movement. This is computationally efficient and can be integrated into modern driver assistance systems to improve road safety. The framework is evaluated using a dataset of videos collected from a driving simulator. Also the development of a low-cost ECG sensor for drowsiness detection and various approaches for behavioural driver drowsiness detection. The resulting sensor is being used in combination with facial-recognition-based drowsiness detection to improve recognition under unfavourable light or occlusion conditions.

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REVIEW ON BRAIN TUMOR DETECTION FROM MRI USING IMAGE PROCESSING

This review aims to develop a machine learning model to detect the brain tumour from MRI images. Brain tumour is a mass or growth of abnormal cells in the brain .Brain tumour detection is a critical task in the medical field, as the early diagnosis of brain tumours can significantly improve the chances of successful treatment. This paper represents a model, that will use Convolutional Neural Network(CNN) based approach for brain tumour detection using magnitic resonance imaging (MRI) scans.

CNN architecture comprises several convolutional layers to extract features. The CNN is trained on a dataset of publicly available brain MRI scans, consisting of both non-tumorous and tumorous images. we expect this CNN-based approach will provide an efficient and accurate method for brain tumour detection using MRI scans. In other approaches, Naive Classifier is used in pattern recognition and classification problems that make prediction based on single feature or variable. The Geometric Median Shift (GMS) is issued for the segmentation of brain tumours in MRI images. The GMS method uses the geometric median to identify the tumour region in the MRI image. Active Contour can be used to segment the tumour from the surrounding brain tissue in an MRI image by several steps including pre-processing, initialization, deformation and post-processing.

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GESTURE RECOGNITION SYSTEM TO IDENTIFY ANIMAL GESTURES

Gesture recognition is a technique that lets us control any electronic device by identifying the movements or positions of different human body parts. Human gestures are a type of non-verbal interaction that can represent the most instinctive and unique approach for communicating with computers. When compared with all possible instances for gesture technology now available, there is no method for interpreting animal gestures. The main objective of our project is to create an animal gesture recognition system that recognizes emotions of animals such as dogs and cats. The animal posture, such as the tail's position, hand movements and eye movements will be initially recovered and subsequently used for model training.

Currently there is no dataset available for validating the system. The user provides an image of the animal as input into the detector system. For our approach, we have created a dataset which contains images that are trained and processed and then comparison of input images is done with those present in the dataset. The corresponding classification of emotions such as anger, fear, happiness are conveyed by the gestures provided into the system displayed as the output. This study successfully integrates the animal images and applies processing and detecting techniques thus achieving good recognition results. We here try to figure out how emotions are linked and associated in humans and animals. We believe these trends will be useful for future technologies.

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ARTICLES

MIND BATTLES

-ASHWIN PAVITHRAN M(S6 CSE)

We are all warriors of our own destiny. Fighting for some kind of a memory to regain and reframe what's lost or to remember what's gained. Loose or gain is a phase that need to be faced. It's a realization that what we want isn't what we need. It's an understanding that power comes from pressure and what is light to us comes from the burn.

Our perspective comes from the thoughts we think and these thoughts are a byproduct of our understandings. During the journey of life, we come across troubles and difficulties. What changes some from the rest is the way they face it. The realization of understanding will truly have a better impact in a person's life.

The deeper you realize what's happening inside you; the more you limit fantasizing what's out. It's all and always a conflict between you and the lost you. Whoever wins is a realization and it's a matter of maintenance or a matter of districtiion. You only loose if you stop winning over your fears.

The depths of your mind lies the real sign of your light. It's the flame of the meaning that fear guided you to and the feeling that misunderstood your try. It's in us and will always be. lier or a leader; healer or a hurter and eventually it's all a matter of perspectives that moulds us the way we wanted to be and what we really be.

DATAFICATION

-RITHIK SUNIL(S8,CSE)

Datafication refers to the process of transforming various types of information into a structured format that can be easily analysed and processed by computers. In other words, it's the conversion of real-world activities, events, and behaviours into digital data.

Datafication has been made possible by the exponential growth of digital technologies, which generate massive amounts of data every day. This data is collected from various sources, including social media, internet searches, mobile devices, sensors, and other connected devices.

The process of datafication has transformed many industries, including finance, healthcare, retail, and entertainment. For example, financial institutions use datafication to analyse

financial transactions to detect fraudulent activities, while healthcare providers use it to track patient health metrics to improve medical care.

However, datafication has also raised concerns around data privacy, security, and ethical implications. The vast amounts of data collected by companies and governments can potentially be used to profile individuals and groups, resulting in discrimination or other negative consequences.

In conclusion, datafication is a powerful tool that can help us understand and improve our world, but it's important to address its ethical and privacy implications to ensure that it's used responsibly.

TECHNOLOGY IN AGRICULTURE

-ANOOJA V(S8,CSE)

Technology has had a significant impact on agriculture, transforming the way crops are grown and harvested, improving yields, reducing waste, and increasing efficiency. In this article, we will explore some of the most important technological advances in agriculture.

Precision Farming:

Precision farming is a technology-based approach to farming that uses data analytics and sensors to optimize crop yields and reduce waste. It involves the use of precision GPS systems and sensors to collect data on soil conditions, weather patterns, crop growth, and nutrient levels. This data is analyzed to develop precise farming plans, which enable farmers to make informed decisions about when and where to plant, fertilize, irrigate, and harvest their crops. Precision farming has been shown to increase yields, reduce water usage, and decrease fertilizer and pesticide use.

Drones and Robotics:

Drones and robots are revolutionizing agriculture, enabling farmers to monitor and manage their crops more effectively. Drones can be used to survey fields, monitor crop growth, and identify areas that need attention, such as pest or disease infestations. Robots can be used for tasks such as planting, weeding, and harvesting crops, reducing the need for manual labor and increasing efficiency.

Biotechnology:

Biotechnology has led to the development of genetically modified (GM) crops that are more resistant to pests and diseases, and can withstand adverse weather conditions. GM crops can also be designed to have increased yields and improved nutritional content. Biotechnology is also being used to develop more sustainable farming practices, such as the use of biofuels, and the production of crops that can be used to make biodegradable plastics.

Internet of Things (IoT):

The Internet of Things (IoT) involves the use of sensors and other devices to collect data and transmit it over the internet. In agriculture, IoT can be used to monitor soil moisture, temperature, and other environmental factors, as well as to control irrigation and fertilization systems. IoT can also be used to monitor the health of livestock, track their location, and manage their feeding and breeding schedules.

Vertical Farming:

Vertical farming is a method of growing crops in stacked layers, using artificial lighting and a controlled environment. This allows for year-round crop production, regardless of weather conditions or geographic location. Vertical farming can also reduce water usage, fertilizer and pesticide use, and transportation costs.

In conclusion, technology has brought about significant improvements in agriculture, increasing efficiency, reducing waste, and improving yields. As the global population continues to grow, the use of technology in agriculture will become increasingly important in ensuring food security and sustainability.

IMPACT ON SOCIAL MEDIA

-MIDHUN MOHAN B (S8,CSE)

Social media has become an integral part of modern society, transforming the way people communicate, consume information, and interact with each other. While social media platforms offer numerous benefits, they have also been associated with various negative effects, such as addiction, cyberbullying, and the spread of misinformation. This essay will explore the impact of social media on society, analysing both its positive and negative aspects.

One of the most significant benefits of social media is its ability to connect people across geographic and cultural boundaries. Social media platforms enable individuals to interact with others who share their interests and beliefs, fostering a sense of community and belonging. In addition, social media has become a vital tool for social activism and political organizing, allowing individuals to mobilize and express their opinions on a global scale.

However, social media has also been associated with several negative effects, such as addiction and mental health issues. Studies have shown that excessive use of social media can lead to feelings of loneliness, anxiety, and depression, particularly among young people. Social media addiction has become a growing concern, with many individuals spending hours each day scrolling through their feeds and interacting with others online.

Another significant negative impact of social media is the spread of misinformation and fake news. Social media platforms have been criticized for their role in disseminating false or

misleading information, which can have serious consequences for public health and safety. In particular, the spread of misinformation about the COVID-19 pandemic has been a major concern, with some individuals relying on social media for their news and information rather than traditional media sources.

In addition, social media has been linked to cyberbullying and harassment, particularly among young people. Cyberbullying can have severe consequences for mental health, leading to depression, anxiety, and even suicide in extreme cases. Social media platforms have been criticized for their slow response to bullying and harassment, with many arguing that more needs to be done to protect users from online abuse.

In conclusion, social media has had a significant impact on modern society, transforming the way people communicate, consume information, and interact with each other. While social media offers many benefits, it has also been associated with several negative effects, including addiction, the spread of misinformation, and cyberbullying. As social media continues to evolve, it is important that individuals, governments, and social media companies work together to address these issues and ensure that social media remains a positive force for good in society.

EXTENDED REALITY (XR)

-ANIRUDH K(S8 CSE)

Extended Reality (XR) is an umbrella term that encompasses several immersive technologies, including Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR). These technologies enable users to experience digital content in a more interactive and engaging way than traditional media.

Virtual Reality (VR) creates a fully immersive digital environment that simulates the physical world. Users wear a VR headset that tracks their head and hand movements, creating a sense of presence in a digital world.

Augmented Reality (AR) overlays digital content onto the real world, enhancing or augmenting the user's perception of reality. This technology is commonly used in mobile applications, where the camera is used to recognize real-world objects and display digital content on top of them.

Mixed Reality (MR) blends the physical and digital worlds, allowing users to interact with digital content while maintaining a sense of presence in the physical world. This technology is commonly used in gaming and education.

Extended Reality (XR) combines these technologies and enables users to experience digital content in a variety of immersive ways. For example, an XR application could use AR to overlay digital content onto the physical world and use VR to create a fully immersive

experience when the user enters a specific location. XR has applications across a range of industries, including entertainment, education, healthcare, and training. It can be used to create engaging and interactive experiences for users, enhance learning and training, and even simulate medical procedures for healthcare professionals.

In conclusion, Extended Reality (XR) is an exciting and rapidly evolving field that has the potential to transform the way we interact with digital content and the physical world around us. As the technology advances, we can expect to see XR used in more industries and applications, creating new opportunities for innovation and creativity.

COMPARING BRAINS AND COMPUTERS – WHICH IS SMARTER?

-VYSHNA PRADEEP(S8CSE)

Comparing brains and computers is a fascinating topic that has captured the attention of many scientists and researchers. The human brain and computer are both incredibly complex, but they differ in many ways.

Firstly, it is important to note that the brain and computer operate differently. The brain is an organic structure made up of billions of neurons that communicate with each other through electrical signals. The computer, on the other hand, is an electronic device that uses circuits and chips to process information. One of the most significant differences between the brain and computer is their capacity for learning and adapting. The human brain is capable of learning and adapting to new information in a way that computers cannot. The brain has the ability to create new neural connections and modify existing ones based on experiences, which is why humans can learn from their mistakes and develop new skills over time. In contrast, computers rely on pre-programmed algorithms and cannot adapt to new situations without explicit instructions.

Another difference between the brain and computer is their speed of processing. While computers can process large amounts of data in a short amount of time, the brain is slower in processing information. However, the brain has the advantage of being able to process information in parallel, meaning it can perform multiple tasks simultaneously. In contrast, computers process information sequentially, which means they can only perform one task at a time. When it comes to memory, the brain is more complex than any computer system. The brain has the ability to store and retrieve vast amounts of information, and it can recall memories from years ago. Computers, on the other hand, have limited storage capacity and can only store information that is specifically programmed into them.

Despite these differences, both the brain and computer have their strengths and weaknesses. The brain is more creative and intuitive than computers, while computers are more reliable and consistent in performing tasks. In terms of mathematical calculations and logical reasoning, computers far outperform the human brain.

In conclusion, it is difficult to determine which is smarter, the brain or computer, as they both have their unique strengths and weaknesses. The human brain is better suited for tasks that require creativity and intuition, while computers are better suited for tasks that require speed and accuracy. Ultimately, the brain and computer are different tools that can be used together to solve complex problems and achieve great things.

GENERATIVE AI

-SARANG M K(S8 CSE)

Generative AI refers to the subset of artificial intelligence that involves creating new and original content, such as images, text, music, or even video, from scratch. In other words, generative AI models are designed to create new content rather than simply classifying or identifying pre-existing content. Generative AI algorithms work by learning patterns and relationships from large amounts of data and then using that information to create new content that is similar to the original data. This is done through a process called training, where the algorithm is fed a large dataset and is asked to identify patterns and relationships between different elements within that dataset.

Once the algorithm has learned these patterns and relationships, it can then use them to generate new content that is similar to the original data. For example, a generative AI algorithm trained on a large dataset of cat images might be able to generate new images of cats that are realistic and unique. One popular type of generative AI is the generative adversarial network (GAN), which involves two separate neural networks working together. One network, called the generator, creates new content based on the patterns and relationships it has learned from the original data.

The other network, called the discriminator, evaluates the generated content and provides feedback to the generator, allowing it to refine its output until it is indistinguishable from the original data. Generative AI has many potential applications, including in the fields of art, design, and even medicine. However, it also raises ethical and societal concerns, such as the potential for the creation of fake news, deepfakes, and other types of manipulative content.

TECHNOLOGY

-NANDA S NAIR(S8 CSE)

Since the turn of the 20th century, the word "technology" and its applications have undergone significant change, and this evolution has persisted. The world in which we live is dominated by technology. The growth of human civilization has been significantly influenced by both cultural changes and technological improvement. Through a variety of clever and inventive methods, technology gives creative ways to complete tasks. Our lives are now more

comfortable because of electronic devices, appliances, and faster communication and transportation methods. It has assisted in raising both individual and corporate enterprise productivity. Many operational domains have seen a transformation thanks to technology.It has unquestionably played a significant role in the advancement of humanity over time. In every industry, technology has decreased labour and time requirements and enhanced production efficiency. It has revolutionised transportation and communication while also making our lives simple, cozy, healthy, and enjoyable. Science and technological progress have enabled us to become independent in every aspect of life. A certain technology's innovation eventually makes it a part of society and essential to people's daily lives.

The globe is now more intimately connected than ever thanks to technology. Communication has gotten considerably faster and simpler with the development of technology, which includes phones, fax machines, cell phones, the Internet, multimedia, and email. In many respects, it has changed and impacted relationships. Communication has become so simple thanks to technology that you can call or message anyone from anywhere using a mobile phone and a variety of messaging applications that are free to download.

Social life has been significantly impacted by advancements in communication technologies. Today, people utilise the Internet to shop, pay bills (utilities, credit cards, admission fees), conduct e-commerce, and conduct banking transactions. In the field of marketing, a lot of businesses use the internet to promote, sell, and build brands for their goods. Cities, municipalities, states, and nations use the internet to offer comprehensive tourist and event information. Travelers from all over the world may quickly access information on tourism, sightseeing, lodging options, the weather, maps, event timings, transportation schedules, and the ability to purchase tickets for a variety of tourist locations.The workplace is now more productive and flexible thanks to technology.

Technology is making the education industry improve over time. With technology, students and parents have a variety of learning tools at their fingertips. Teachers can coordinate with classrooms across the world and share their ideas and resources online. Students can get immediate access to an abundance of good information on the Internet. Teachers and students can access plenty of resources available on the web and utilise them for their project work, research, etc. Online learning has changed our perception of education. Students have learned and used 21st-century skills and tools, like virtual classrooms, Augmented Reality, robots, etc. Technology and banking are now inseparable. Technology has boosted digital transformation in how the banking industry works and has vastly improved banking services for their customers across the globe. Technology has made banking operations very sophisticated and has reduced errors to almost nil, which were somewhat prevalent with manual human activities. Banks are adopting Artificial Intelligence to increase their efficiency and profits. With the emergence of Internet banking, self-service tools have replaced the traditional methods of banking.

At present, manufacturing industries are using all the latest technologies, ranging from big data analytics to artificial intelligence. Big data, Augmented Reality and Virtual Reality, and Internet of Things are the biggest manufacturing industry players. Automation has increased the level of productivity in various fields. It has reduced labour costs, increased efficiency,

and reduced the cost of production. Technological advancements in the healthcare industry have not only improved our personal quality of life and also they have improved the lives of many medical professionals and students who are training to become medical experts. It has allowed much faster access to the medical records of each patient. The Internet has drastically transformed patients' and doctors' relationships. Everyone can stay up to date on the latest medical discoveries, share treatment information, and offer one another support when dealing with medical issues. Modern technology has allowed us to contact doctors from the comfort of our homes. There are many sites and apps through which we can contact doctors and get medical help.

Today, farmers work very differently than they would have decades ago. Data analytics and robotics have built a productive food system. Digital innovations are being used for plant breeding and harvesting equipment. Software and mobile devices are helping farmers harvest better. With various data and people's reliance on numerous devices and technologies has led to a lack of physical activity and the temptation to live a sedentary lifestyle. The productivity of people, businesses, and the country has improved thanks to technology, but machine efficiency has not increased. Beyond the instructions that are supplied into their system, machines are unable to plan or think. Human interaction is essential to technology. The use of computers and cell phones has increased social isolation. Technology use is also costing jobs and deterring pupils from learning. The development of weapons of mass devastation has been facilitated by technology.

THE METAVERSE: A NEW FRONTIER FOR DIGITAL LIFE

-MUHAMMED HADHIF MANOLY(S4 CSE)

As a professional technical student, we are always on the lookout for new technologies and applications that could change the world. One of the most exciting emerging fields in recent years is the *Metaverse*, a digital universe where people can interact, work, play, and create in a shared virtual space. The concept of the Metaverse has been around since the 1990s, but recent advances in virtual reality, augmented reality, blockchain, and other technologies are making it more feasible than ever before. The Metaverse is not just a gaming platform or a social network. It is a new kind of economy, where digital assets can have real-world value and where people can earn a living by designing, building, and selling virtual goods and services. There are many unique set of skills that could be very valuable in the Metaverse. Here are some of them.

Building Virtual Worlds:

The Metaverse is a vast and complex system of interconnected virtual worlds, each with its own rules, physics, and logic. Building these worlds requires expertise in computer graphics, 3D modeling, physics simulation, artificial intelligence, and network programming. As an

engineering student, you can learn these skills and apply them to create new and exciting virtual environments.

Designing Virtual Products:

Just as in the real world, the Metaverse needs products and services that people want to buy. These could be anything from virtual clothing and furniture to digital art and music. Designing these products requires a combination of creativity and technical skills.

Developing Blockchain Applications:

The Metaverse relies on blockchain technology to create a secure and decentralized economy. This means that virtual assets like digital land, virtual currencies, and NFTs (non-fungible tokens) can be bought, sold, and traded without the need for a central authority.

Creating Virtual Reality and Augmented Reality Experiences :

The Metaverse is not just a 2D screen-based environment. It can also be experienced through virtual reality (VR) and augmented reality (AR) devices. One can learn to create immersive VR and AR experiences that allow people to explore and interact with the Metaverse in new and exciting ways to professionalize his skills.

The Metaverse is still in its early stages, but it has the potential to be a game-changer for many industries, including entertainment, education, healthcare, and finance. As an engineering student, you have the opportunity to be at the forefront of this new frontier, to learn new skills, and to shape the future of digital life.

VIRTUAL REALITY AND AUGMENTED REALITY: THE FUTURE OF INTERACTIVE EXPERIENCES

-SARAN SCARIA(S2 CSE)

Virtual Reality (VR) and Augmented Reality (AR) are two emerging technologies that are transforming the way we interact with digital content. While they share some similarities, they also have some important differences that make each technology unique. In this article, we will explore what VR and AR are, how they work, and their potential applications in various industries.

Virtual Reality is a technology that simulates a computer-generated environment that can be experienced through a VR headset or other devices such as a computer or a smartphone.

The environment is designed to be as realistic as possible, allowing users to interact with it as if it were real. Users can move around and explore the virtual world, and they can interact with objects and other users within the environment. VR technology typically involves a combination of hardware and software, including motion sensors, display screens, and computing power. One of the key benefits of VR technology is its ability to transport users to new and exciting places without leaving their physical location. This has many potential

applications, such as in gaming, education, and training. For example, a VR simulation could be used to train astronauts for space missions or to teach medical students how to perform complex surgeries.

Augmented Reality is a technology that overlays computer-generated content onto the real world, typically through a smartphone or tablet camera or a headset with built-in cameras. The content can include images, videos, and 3D models that are anchored to specific locations in the real world. This creates a blended reality where digital content coexists with the physical world, allowing users to interact with both. AR technology has many potential applications, such as in gaming, marketing, and education. For example, a museum could use AR technology to create interactive exhibits that bring historical artifacts to life or a retail store could use AR to provide customers with virtual product demonstrations.

While VR and AR share some similarities, there are some important differences between the two technologies. The main difference is that VR creates a completely immersive virtual environment that blocks out the real world, while AR overlays digital content onto the real world. This means that VR is ideal for creating fully immersive experiences, while AR is better suited for creating blended reality experiences.

Both VR and AR have many potential applications in various industries. In gaming, VR technology is already being used to create immersive gaming experiences that allow players to fully immerse themselves in the game world. AR technology has also been used in gaming, such as the popular mobile game Pokemon Go, which overlays virtual creatures onto the real world. In education, both VR and AR have the potential to transform the way students learn. VR simulations can provide hands-on training in a wide range of subjects, while AR can be used to create interactive educational content that brings concepts to life.
In healthcare, VR and AR have the potential to revolutionize medical training and patient care. VR simulations can be used to train medical professionals in complex procedures, while AR can be used to create interactive patient education materials.

Virtual Reality and Augmented Reality are two exciting technologies that are transforming the way we interact with digital content. While they have some important differences, both technologies have many potential applications in various industries. As these technologies continue to evolve and become more accessible, we can expect to see even more innovative applications in the future.

CHAT GPT: EXAMINING THE BENEFITS AND LIMITATIONS OF AI LANGUAGE MODELS

-Muhd. Minhaj Mahroof(S8 CSE)

ChatGPT is a language model developed by OpenAI that is capable of generating human-like

responses to natural language prompts. It is based on the GPT (Generative Pre-trained Transformer) architecture and is trained on a large corpus of text from the internet. The model can be used for a variety of natural language processing tasks such as text generation, summarization, question answering, and more. ChatGPT can be integrated into chatbots, virtual assistants, and other conversational AI systems to provide more natural and engaging interactions with users. It can generate responses that are almost indistinguishable from those of a human. It can understand the nuances of language, context, and emotion, and respond accordingly. It can be used for a wide range of natural language processing tasks, including text generation, summarization, translation, and more. This makes it a versatile tool for developers and businesses. It can be trained on vast amounts of data, which means that it can be scaled up to handle large volumes of requests from users. Compared to traditional chatbot development, using ChatGPT can be more cost-effective since it requires less manual programming and can generate more natural and engaging responses.ChatGPT and other language models can be used to make technology more accessible to people with disabilities, such as those who have difficulty typing or using a mouse.

As chatbots and virtual assistants become more ubiquitous, there are concerns around data privacy and security. If ChatGPT is used to collect sensitive information from users, it will be important to ensure that proper safeguards are in place to protect that data. Overall, ChatGPT has the potential to bring many benefits to society, but it is important to be aware of its potential risks and to use the technology responsibly. As ChatGPT becomes more sophisticated, there is a risk that people may become too reliant on technology for communication and decision-making, which could have negative effects on social interactions and critical thinking skills. While ChatGPT is not specifically designed to affect students, there are potential negative effects that could arise if students rely too heavily on the technology. If students rely too heavily on ChatGPT to answer their questions and provide information, they may not develop critical thinking skills and the ability to evaluate information for themselves. If they do not learn to critically evaluate the information they receive from ChatGPT, there is a risk that they may be exposed to misinformation or biased perspectives. Also, if students become too reliant on ChatGPT for information and communication, they may not develop important skills such as independent research, problem-solving, and communication. Overall, it is important to be aware of the potential negative effects of ChatGPT and other conversational AI technologies and to use the technology responsibly. Developers, policymakers, and users all have a role to play in ensuring that these technologies are developed and used in ways that benefit society as a whole. Besides, it is important for students to use ChatGPT and other technology responsibly and to ensure that they are developing a broad range of skills and knowledge to prepare them for the future. Teachers and educators have an important role to play in guiding students in the responsible use of technology and in developing critical thinking skills.

POEMS

LET IT GO !

The suspicious clouds moving far

Struck alone in the prison,

In the prison of memory's war

Struck beneath the souls of red roses.

The souls of Mine!

Scents of Jasmine

Ascenting from her soul,

Drops of hail whisking

Through the memories.

And I keep going back...

Going back to the moments

Finding ourselves again,

Whispering the same words,

And when the time comes...?

Time comes to let it go!

-Sneha Ajith(S4 CSE)

ETERNAL

Braves dies but live insides

Cowards cover in the dark

The only survivors that remains

The ones who rage the trust

To remember their power

The ones who remembers

Passing through generations

To regain the lost bravery

The unworthy is still known

As some cowards untrustworthy

their own soul and motherland

Find the lost sword, fallen ages ago

The chosen one regains after all

The time to rise has begun

The chains of cruelty be broken

Let the flag be risen by all

Let peace be for all

Let the cages be fallen

Let they see the rise of an era

The era after an eternal sleep!

-ASHWIN PAVITHRAN M(S6 CSE)

THE DRIZZLING RAINFALL

Rain drops falling from the sky.

With clouds growing darker,

Pouring out its tears hardly on the ground.

Lightning striking out,

With a horrific booming thunderstorms.

Wind blowing off stronger,

With branches falling heavily on the ground.

Making the earth grow darker each moment.

Sound of the drizzles heard on every fall.

Spreading fragrance of soil all around.

Quenching off nature's thirst.

Washing off all the sins of the earth,

So that the sun can shine brighter the next day.

With the rainbow smiling wider in the sky.

-NANDA S NAIR (S8 CSE)

IDENTITY CRISIS

Am I in the right path?

Is this meant to be mine?

Am I the intruder of someone else's dream?

Will I make it?

Can I withstand this unfairness ?

Why is it always me?

Why am I all alone in this?

Why do I keep failing?

How long do I have to keep this fake smile?

Will someone answer to my desperateness?

Oh, who will, its embarrassing, even for me.

Can they see the broken pieces of my heart?

Oh, I don’t think they want to.

And the pain that I suffer,

Do they really care?

Again, I don’t think they do.

What am I? Who am I?

Will this ever come to an end?

Do I have a happy ending?

I want to run away,

Far away from this nightmare.

Far , far away from this deadly world.

-AMINA MALIHA(S8 CSE)

THE CRY FOR HELP

You touched my body,

Without my consent.

Oh, I don't even know you.!

He smelled her,

With his loathing eyes,

Like an animal.

She was crying,

She was screaming,

She believed someone, Someone would help.

She tried hard to escape. He trashed her.

Her soul fled her body, Without her consent.!

And those people, Lost their humanity.

-KADEEJA SHIRIN C P(S8 CSE)

A CRY OF WOAH!

Let me cry.
Let me burn.
Let me go wild.
Let me be free.

Why do you need.
Why do you need me?
Just simply kill.
Simply kill me.
What's the wait?
What's the hold up.

Nothings ever easy.
Nothings ever the same.
All it is,

Is just hate.
Nothing else,
Nothing new.
Just dark unending despair.
Making you void.

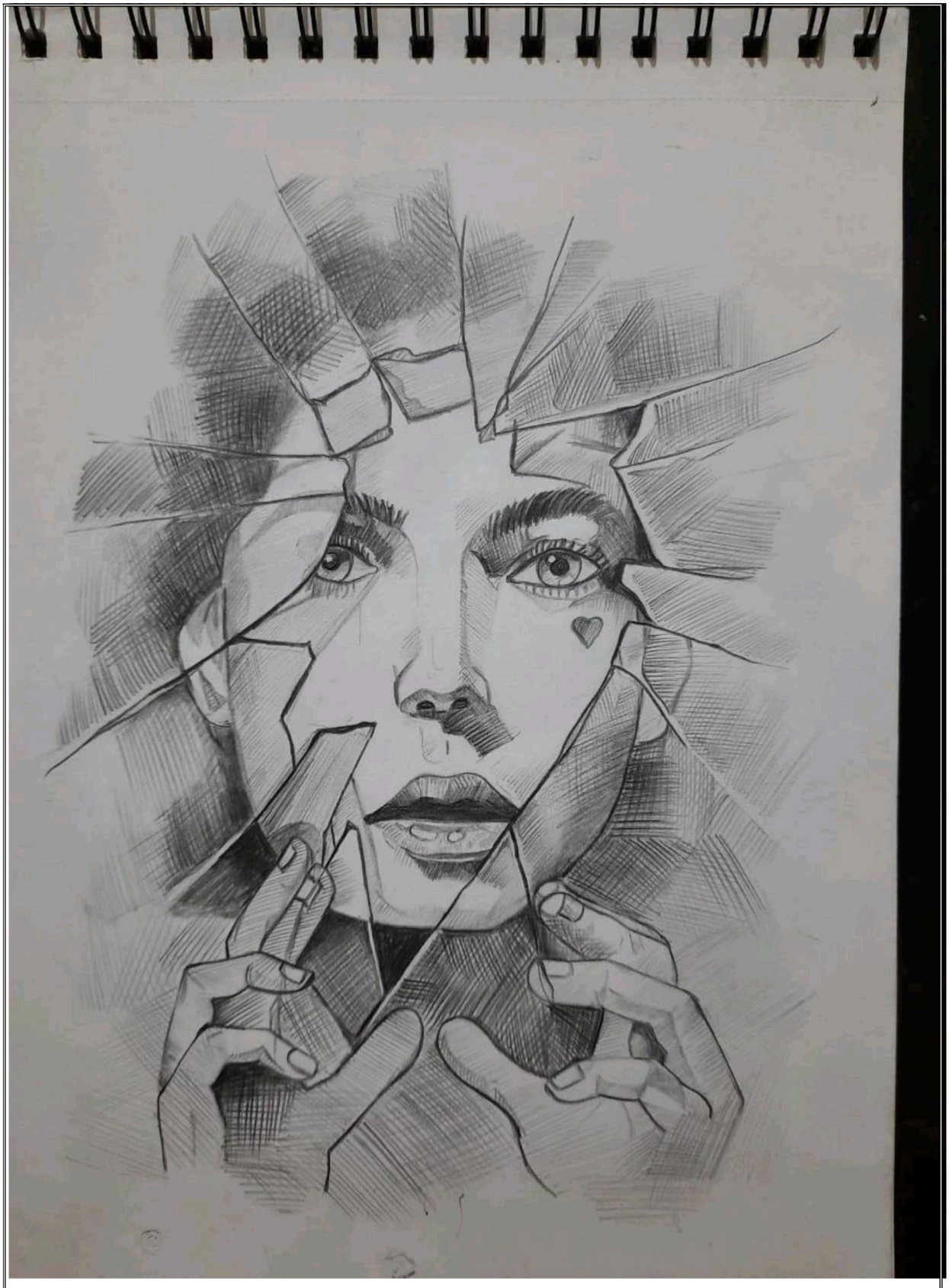
Unavoidable darkness.
Which loves to consume the heart.
Corrupting your mind:

Let the ashes burn us alive.
Let the cinders reignite.
Let it rekindle ourselves.
Our never ending pain.
Let it remind you of the past you once faced.
And pave way for new paths.

-ARPIT RAMESAN(S8 CSE)

ART WORKS

MOHAMMED RIYAD
S2 CSE



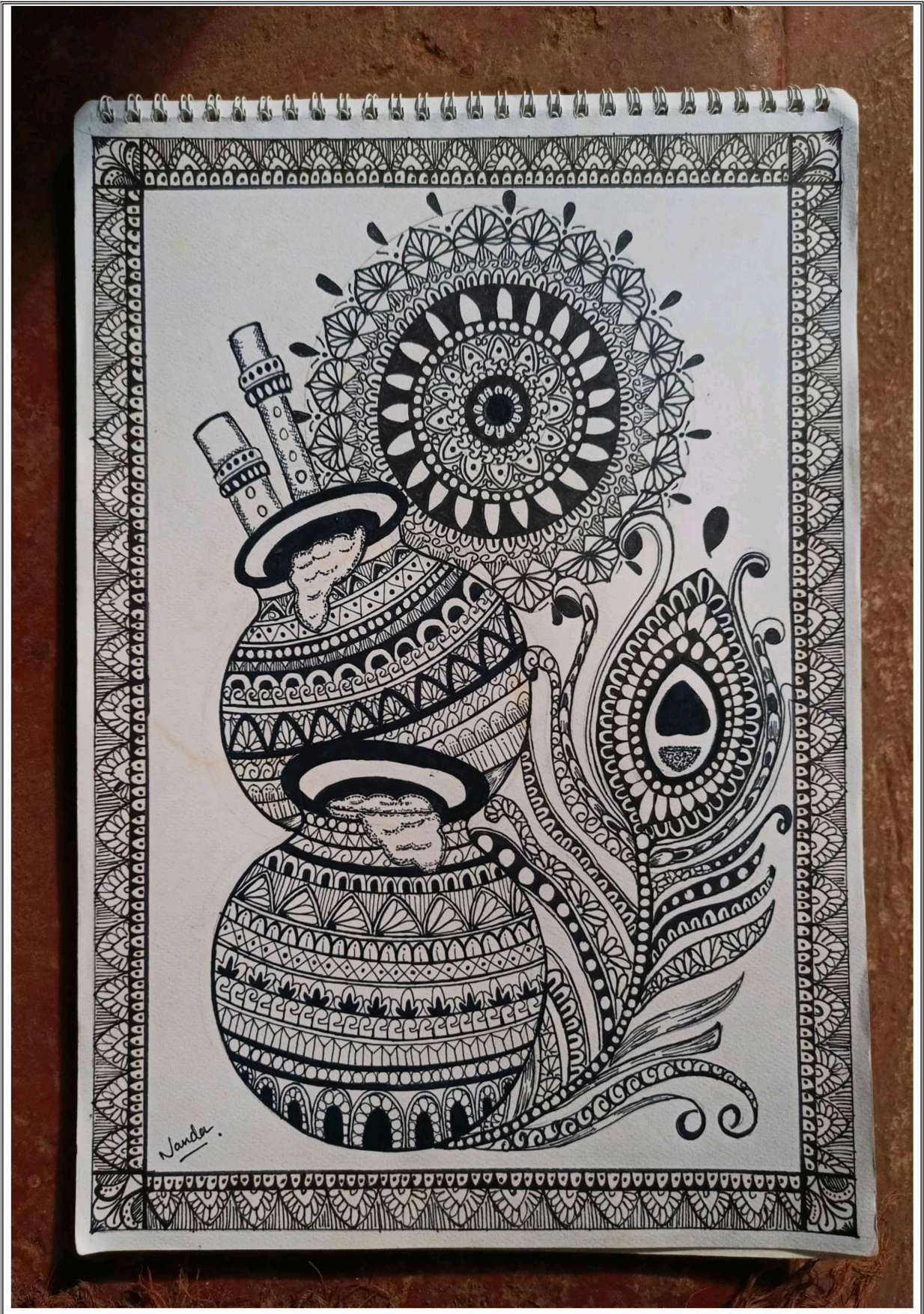
NYNIKA SANDEEP
S6 CSE

SREYA SAJEEVAN
S2 CSE

SREYA SAJEEVAN
S2 CSE

ARPIT RAMESAN
S8 CSE

ARPIT RAMESAN
S8 CSE



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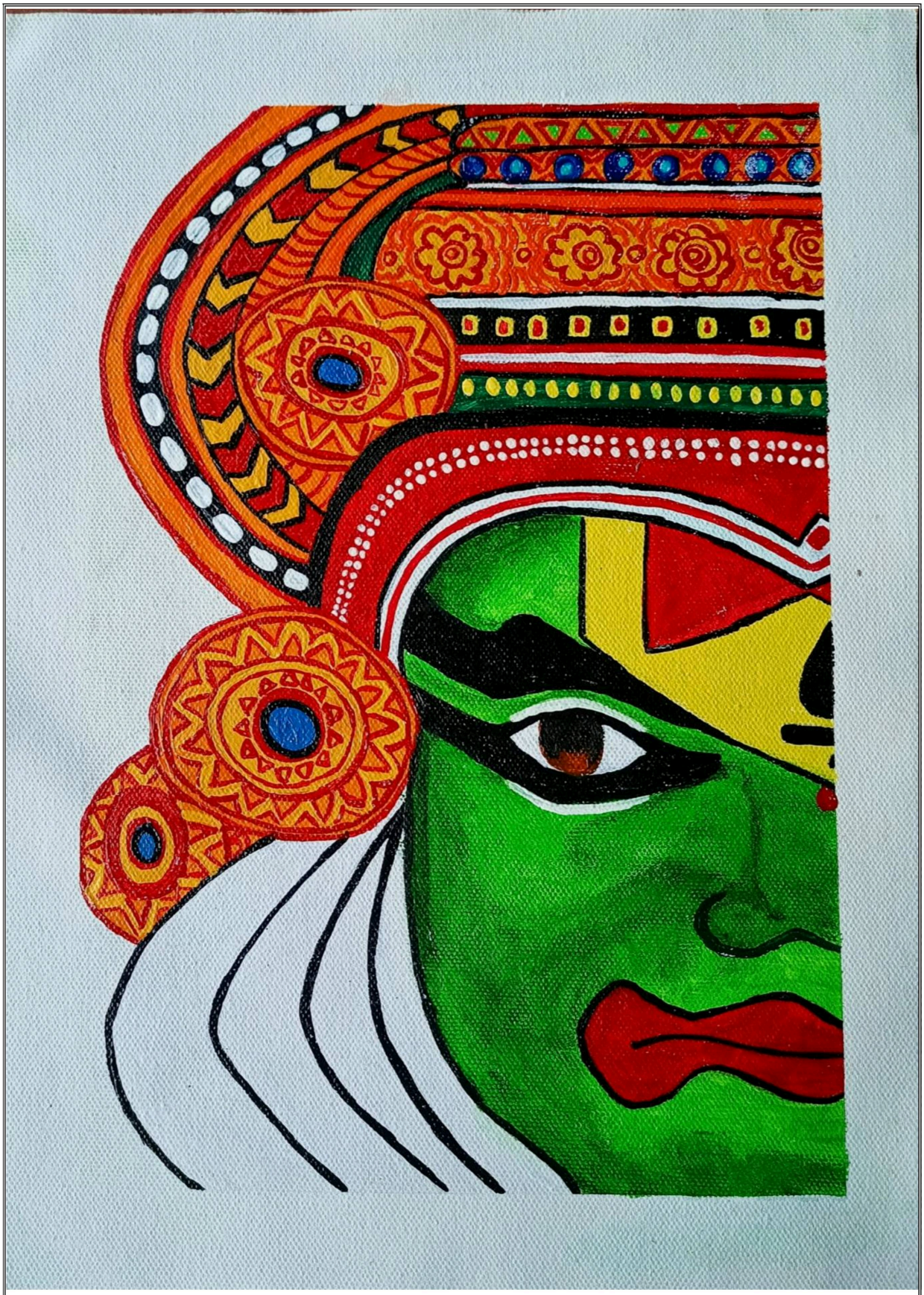
S8 CSE



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NANDITHA P
S8 CSE

ARZA FATHIMA
S2 CSE

PRINCE RADHAKRISHNAN
S8 CSE

PRINCE RADHAKRISHNAN
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YADAV JAGADHEESH
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To produce globally competent and socially responsible Computer Science Engineers.

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