2022-23

GALGOTIAS COLLEGE OF ENGINEERING AND TECHNOLOGY

ELECTRA

THE MAGAZINE

VOLUME 7

ELECTRICAL & ELECTRONIC DEPARTMENT

TABLE OF CONTENT

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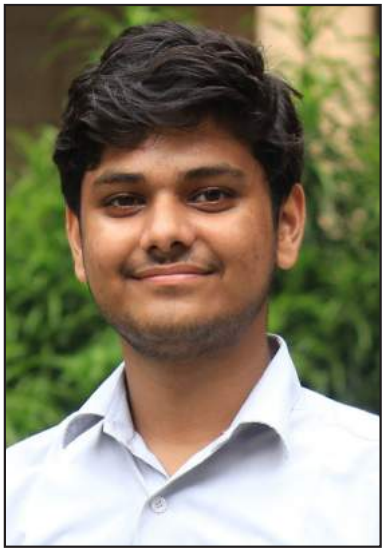

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OUR MENTORS

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Mr. Dhruv Galgotia

Prof. (Dr.) Md. Asim Quadri

FROM CHEIF EDITOR'S PEN

Prof. (Dr) A. Ambikapathy
HOD EEE Department
Galgotia College of Engineering and Technology

I am gratified and it gives me immense pleasure to unveil the Volume-7 of our departmental magazine ELECTRA (The Magazine). I am glad to pen for this wonderful magazine as an appreciation of the commendable efforts put forth by the team. I wish that this magazine establishes to be a flint to fire the enthusiasm and excite the minds of the students for many intrusive innovations. Being the HOD, it is an indispensable responsibility to take all those endeavors at its pinnacle and hopefully this magazine will be its epitome. I bestow my heartfelt gratitude to every student and faulty member who made this possible. Through this message, I wish them "All the very Best" for their future endeavours to and hope the students.

FROM PRESIDENT'S PEN

Harshit Gunashekar
President/2022-2023
Zion Club, Electrical and Electronics
Engineering Department

I am truly honored to address you in the pages of this esteemed publication. As the President of, it is my privilege to share the remarkable strides we've made in our field.
In the past year, we've seen unprecedented growth and innovation, thanks to the dedication and hard work of our members and partners. It's a testament to our shared vision and commitment to excellence. Thank you for your unwavering support, and I look forward to the journey ahead.

FROM VICE PRESIDENT'S PEN

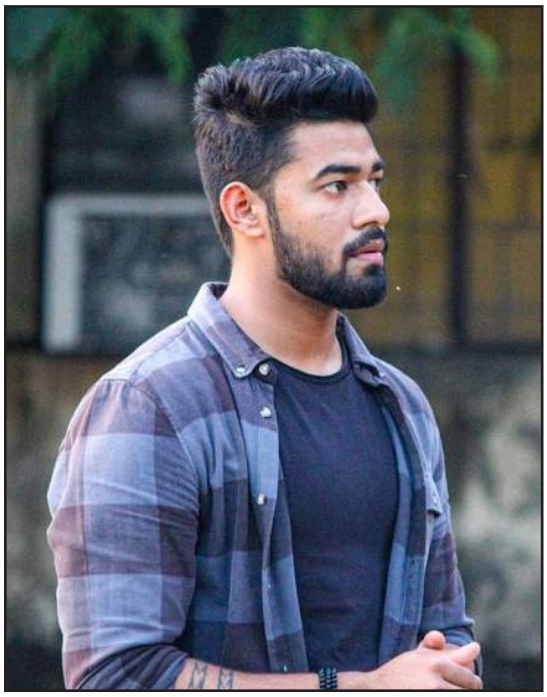
Yuvraj Singh
Vice President/2022-2023
Zion Club, Electrical and Electronics
Engineering Department

I am delighted to address you through the pages of this prestigious magazine as the Vice President of the department.It is with great pleasure that I share some of the significant developments and insights from our department.Over the past year, our team has been working tirelessly to advance our department's mission and goals. I want to express my sincere appreciation to everyone who has contributed to our achievements.

Thank you for your ongoing support, and I look forward to the journey ahead.

FROM GENERAL SECRETARY'S PEN

Uday Varshney
General Secretary/2022-2023
Zion Club, Electrical and Electronics
Engineering Department



As the General Secretary of the Zion Club, I had the privilege of leading and participating in a vibrant community of budding engineers. This experience not only allowed me to actively engage with my academic peers but also played a pivotal role in my personal growth. Through my role in the club, I honed my leadership skills, developed strong organizational abilities, and fostered a sense of teamwork and camaraderie among club members. Overall, my time with the Zion Club was an enriching journey that contributed significantly to my college experience.

FROM GENERAL SECRETARY'S PEN

Hitesh Joshi
General Secretary/2022-2023
Zion Club, Electrical and Electronics
Engineering Department

It is with immense pride and excitement that I extend my warmest greetings on the launch of the 7th edition of ELECTRA, the flagship magazine of our esteemed departmental club, Zion. In the ever-evolving landscape of technology, Zion stands tall as a beacon of innovation, a nurturing ground for brilliant minds, and a platform where ideas find their wings.

This issue of ELECTRA, meticulously crafted by the diligent members of Zion, exemplifies our collective dedication to knowledge, creativity, and excellence. Within these pages, you'll find a tapestry of insightful articles, groundbreaking research, and thought-provoking innovations. I want to express my heartfelt appreciation to the dedicated team behind ELECTRA.

Here's to Zion, to ELECTRA, and to the future innovators and leaders that our department continues to nurture.

Wishing you happy reading and endless inspiration.

FROM TREASURER'S PEN

Avantika Vishwakarma
Treasurer/2022-2023
Zion Club, Electrical and Electronics
Engineering Department

Good things remain good only because they are always scarce. I am gratified to know that the department of Electrical and Electronics Engineering is bringing out the Volume 7 issue of their technical magazine "ELECTRA" of this academic year (2023-2024). I am glad to pen for this wonderful magazine as an appreciation of the commendable efforts by the team for its grand beginning.The efforts taken to bring about innovative content is appreciable.This is a productive technical material and subsidiary skill developing tool for the students. I wish "Zion Club of Electrical and Electronics Engineering Department" a very big success in all their ventures. I also applaud the coordination and efforts behind the team to bring out this issue. I wish them all success.

FROM REAGENT SECRETARY'S PEN

Anu Verma
Reagent Secretary/2022-2023
Zion Club, Electrical and Electronics
Engineering Department

During my tenure as the Regent Secretary of the Departmental Club Zion at Galgotia College of Engineering and Technology in the Electrical and Electronics Engineering department, I had a transformative experience filled with valuable learning opportunities. First and foremost, I learned the importance of effective leadership and communication. Coordinating various activities and events for the club required clear and efficient communication with both the club members and the faculty. This taught me how to delegate tasks, set goals, and motivate team members to work together cohesively. Organizing technical workshops and seminars was a significant part of our responsibilities. In conclusion, my time as the Regent Secretary of the Departmental Club Zion was a journey of personal and professional growth.

FROM SECRETARY'S PEN

Ritik Kumar Pandit
Secretary/2022-2023
Zion Club, Electrical and Electronics
Engineering Department

Good things remain good only because they are always scarce. I am gratified to know that the department of Electrical and Electronics Engineering is bringing out the Volume 7 issue of their technical magazine "ELECTRA" of this academic year (2023-2024). I am glad to pen for this wonderful magazine as an appreciation of the commendable efforts by the team for its grand beginning.The efforts taken to bring about innovative content is appreciable.This is a productive technical material and subsidiary skill developing tool for the students. I wish "Zion Club of Electrical and Electronics Engineering Department" a very big success in all their ventures. I also applaud the coordination and efforts behind the team to bring out this issue. I wish them all success.

FROM SECRETARY'S PEN

Avinash Rai
Secretary/2022-2023
Zion Club, Electrical and Electronics
Engineering Department

Once upon a time, the Sun and the Wind had a friendly competition. They wanted to see who could persuade a passing traveler to remove their coat. The Wind went first, blowing with all its might. But the harder the Wind blew, the tighter the traveler clung to their coat.
Then, it was the Sun's turn. Instead of force, the Sun gently beamed its warm rays. As the traveler felt the comforting warmth, they willingly removed their coat.
The moral of the story is that kindness and warmth are often more persuasive than force and aggression. It teaches us that a gentle approach can achieve what strength and harshness cannot.
This was the summary of what I learnt from my tenure as a secretary in Zion Club of EEE department.

SPECIAL MENTION

Vaishnavi Srivastava

Zion Club, Electrical and Electronics Engineering Department

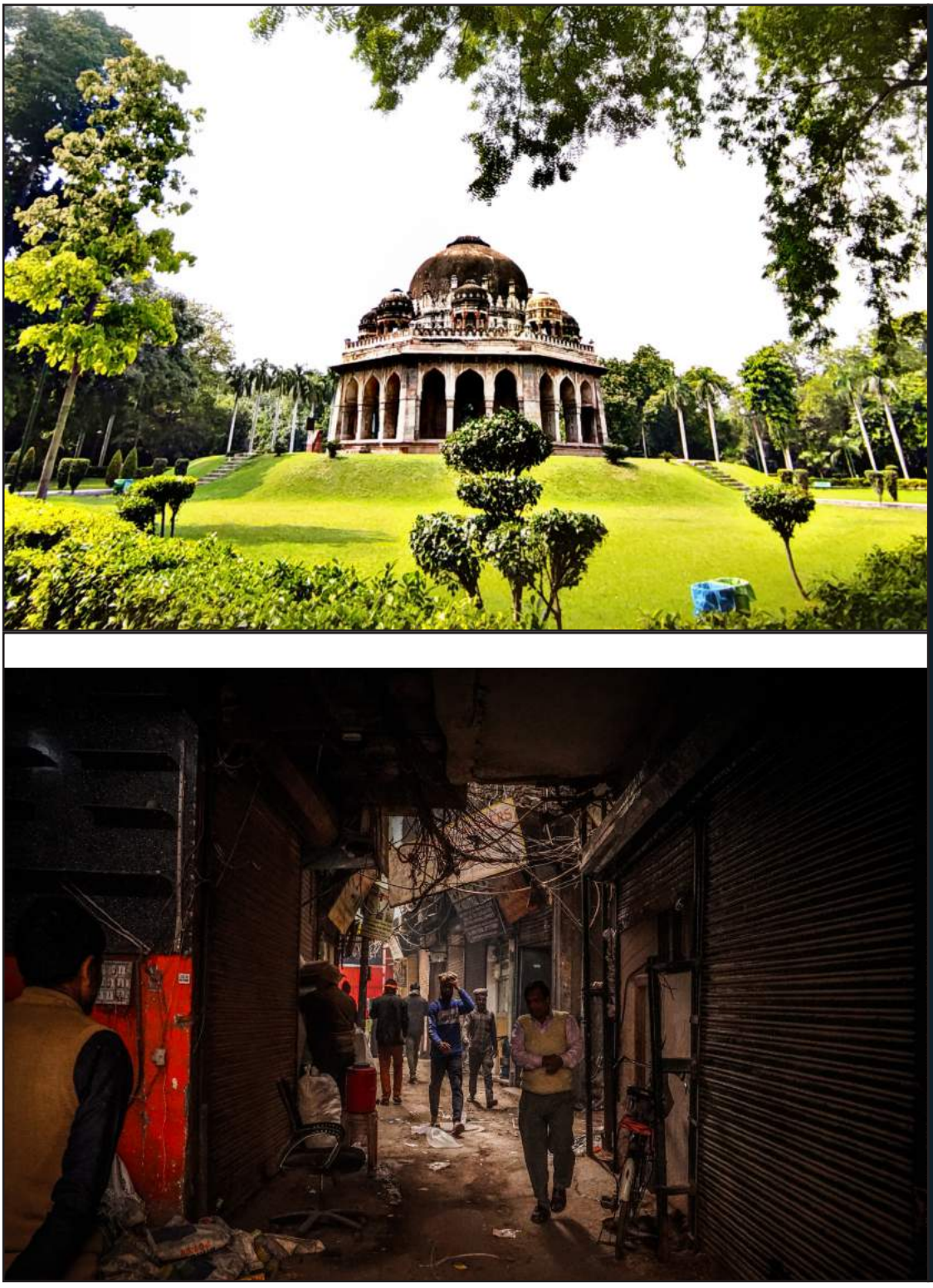
I’m honored to have the opportunity to connect with you through the pages of this esteemed magazine as the Department Representative.Within these pages, you will find engaging stories, valuable research, and exciting projects that reflect the vibrant and dynamic nature of our department. It’s a testament to the dedication and innovation that drive our work forward.
I’d like to express my heartfelt gratitude to all those who have contributed to our successes. Together, we are shaping a better future and embracing opportunities for growth and improvement.
Thank you for your continued support, and I look forward to the exciting journey ahead.

CAPTIVATING CANVAS

A Kaleidoscope of Dreams

By: Salman Akhtar

CAPTIVATING CANVAS



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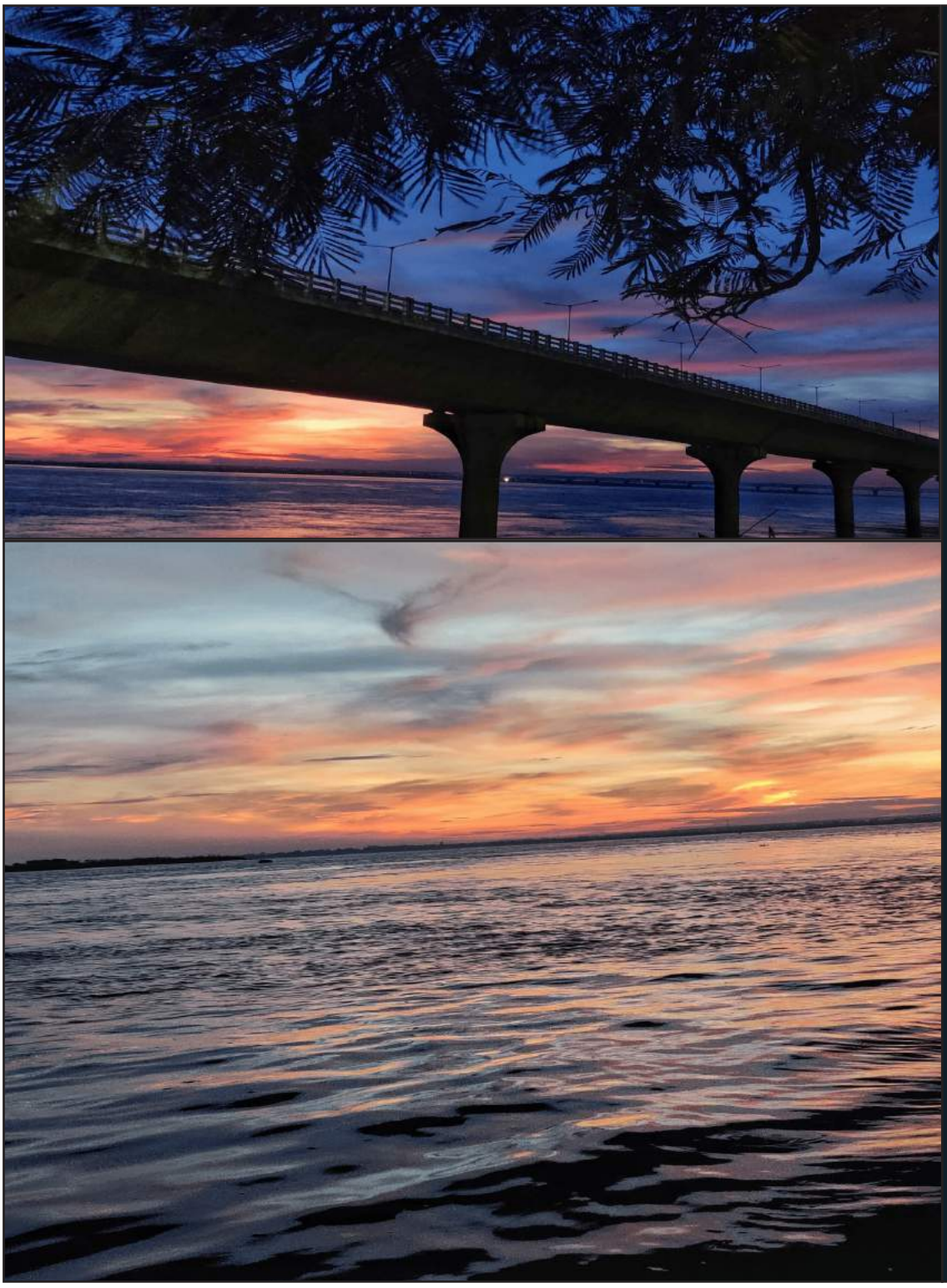
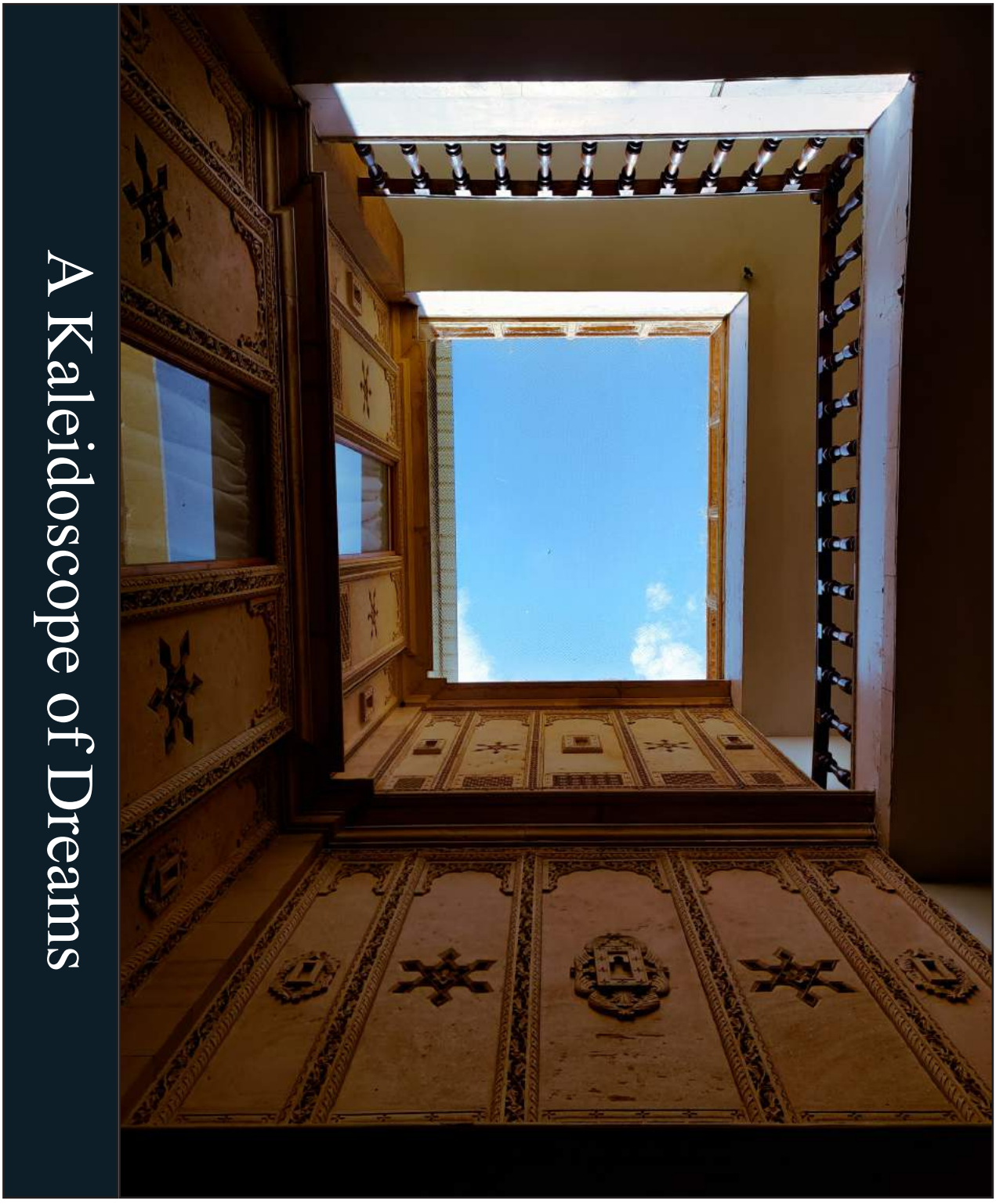


A Kaleidoscope of Dreams

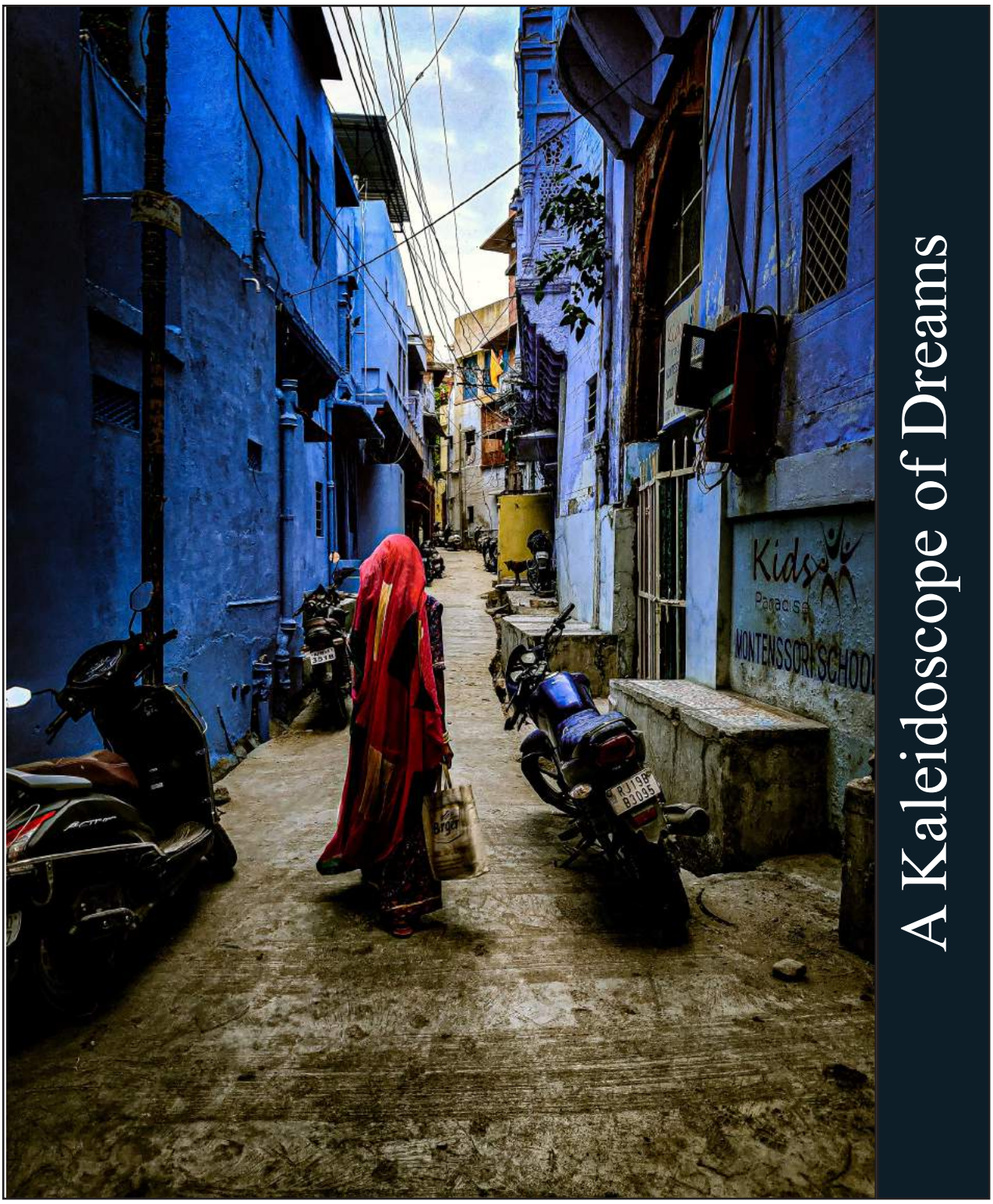
By: Aanya Raj

CAPTIVATING CANVAS



By: Yash Nandwal

CAPTIVATING CANVAS



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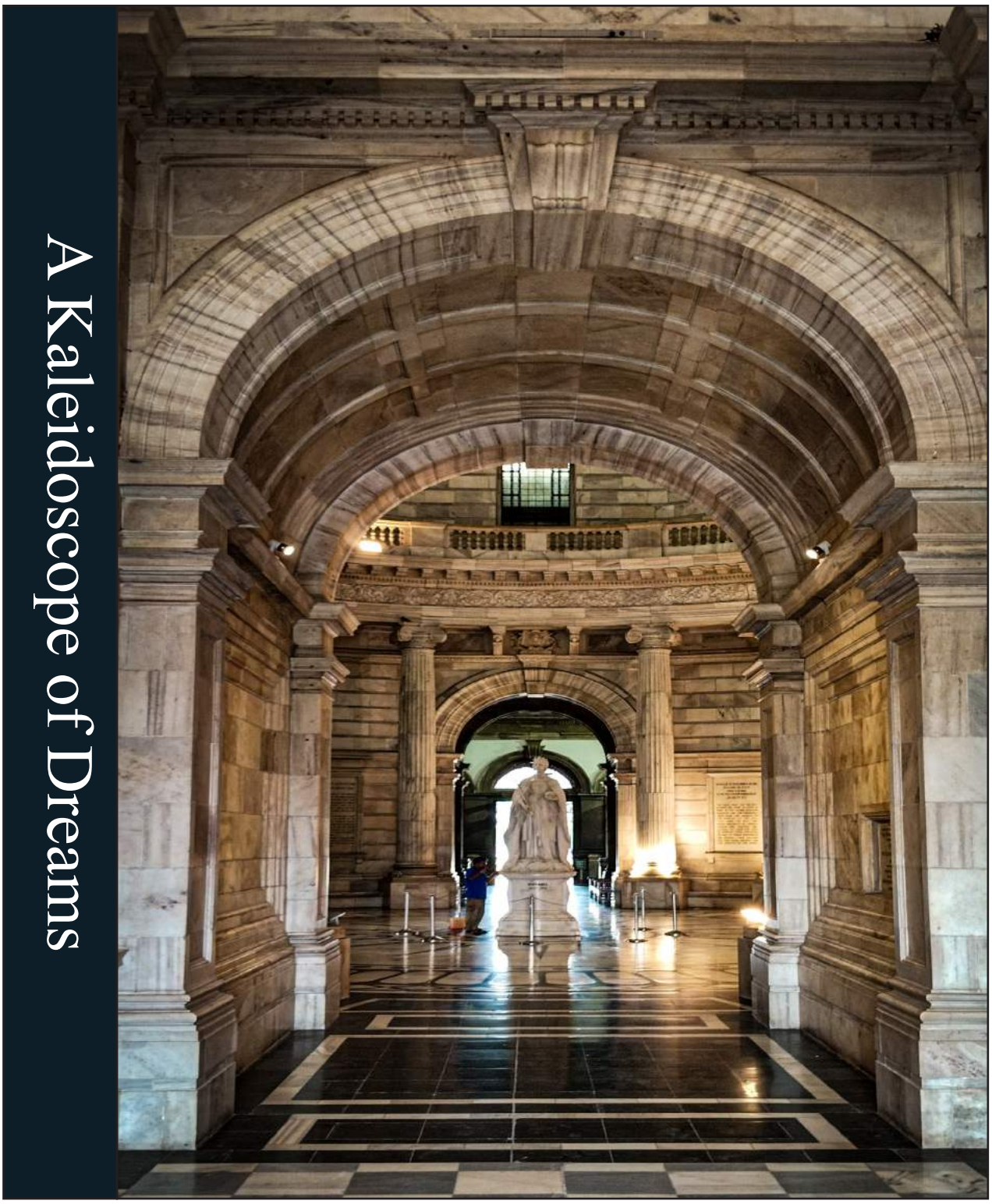
By: Yash Nandwal

CAPTIVAVTING CANVAS

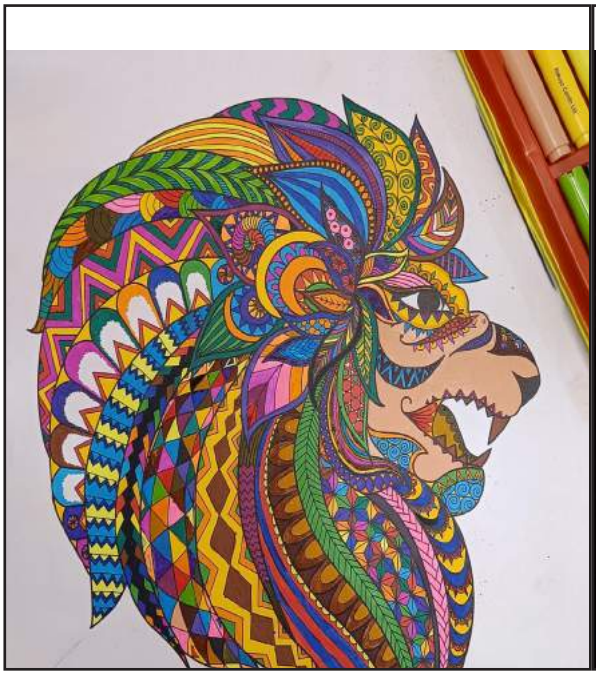


By: Ritik Varshney

BRUSHSTROKES OF SERINITY

Artistry Unleashed

By: Deepak Kushwaha



By: Jaladhi Srivastava

By: Pranav Raj

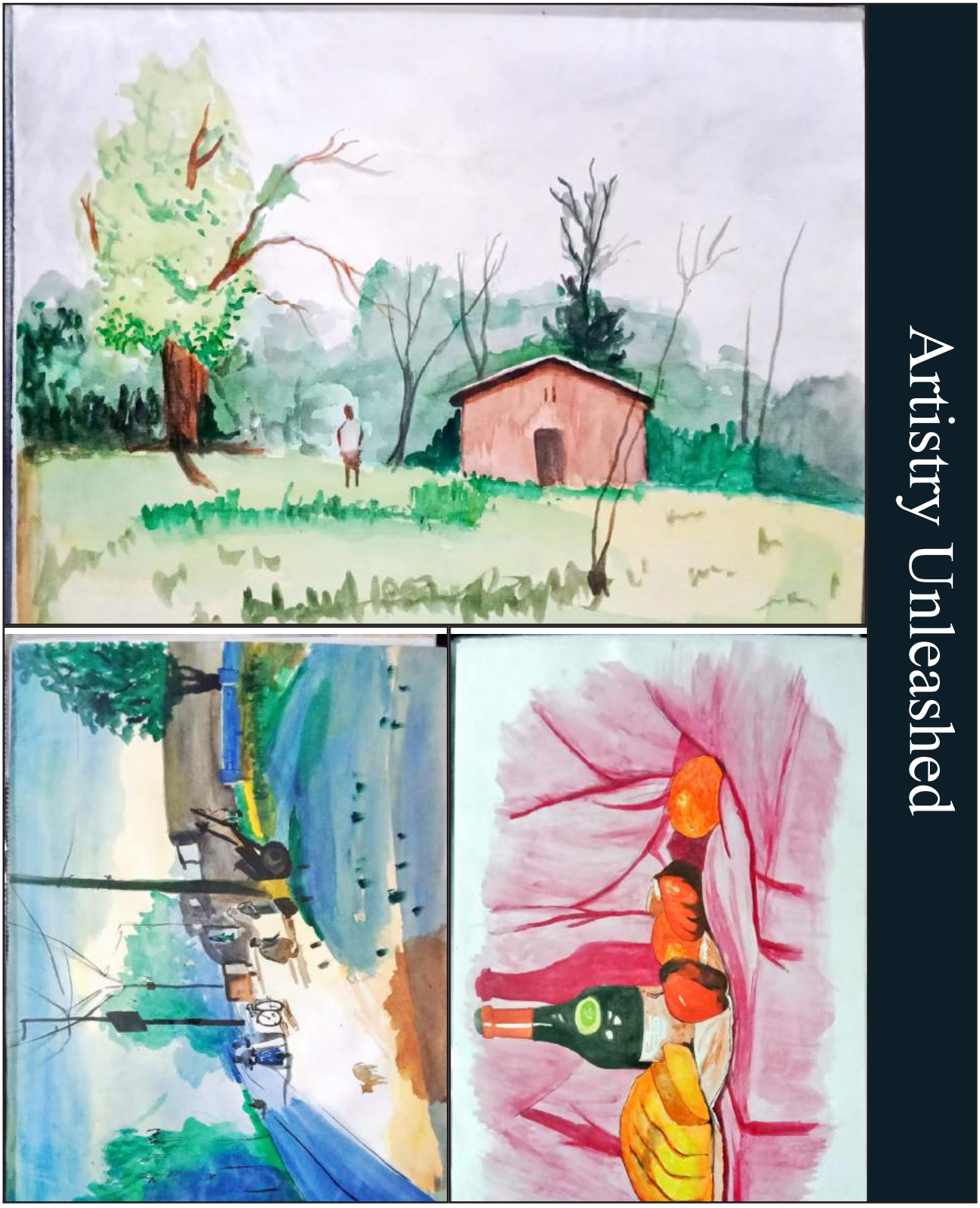
BRUSHSTROKES OF SERINITY

Artistry Unleashed

By: Aishani Rastogi

By: Pranav Raj

BRUSHSTROKES OF SERINITY



Artistry Unleashed

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INDIA'S STARTUP BOOM

Fueling Economic Growth and Employment Opportunities

India's startup ecosystem has witnessed an extraordinary surge in recent years, fostering a remarkable transformation in the country's economic landscape. With a plethora of innovative ideas, ample investor support, and a growing pool of talented entrepreneurs, India is poised to become a global hub for startups.

According to recent data, India currently ranks third globally in terms of the number of startups, with over 50,000 registered enterprises. This boom has significantly contributed to the nation's GDP, with startups accounting for approximately 3.5% of India's total GDP.

Furthermore, the financial aspects of startups in India are promising. Venture capital investments in Indian startups reached a staggering $15 billion in 2022, a substantial increase from previous years. This influx of capital has fuelled entrepreneurial aspirations, encouraging more individuals to launch their own ventures.

One of the most significant benefits of this startup revolution is the creation of employment opportunities. Startups in India have generated millions of jobs across various sectors, particularly in technology, e-commerce, and fintech. As per estimates, startups have created over 1.5 million direct jobs, contributing significantly to reducing unemployment rates.

In conclusion, India's startup ecosystem has become a driving force in the country's economic growth story. With impressive numbers and substantial financial backing, startups are bolstering India's GDP and creating a wealth of employment opportunities. As the nation continues to nurture and support these innovative ventures, the future of India's startup landscape appears exceedingly bright.

By: Ravi Utsav

WHISPERS OF MIND

Overthought Melodies

In the maze of thoughts,I stray,
Overthinking leads me astray,
From morn till night, the cycle turns,
An endless loop, my mind churns.

I dissect each word, each glance, each tone,
In the echo chamber of my own,
A marathon of worry, without reprieve,
A mental web I cannot leave.

What ifs and maybes, they dance and play,
A relentless torrent throughout the day,
But admist this chaos, I seek the light,
To break the chains, find respite.

For in self-awareness, a path unfolds,
To tame the overthinking that grips and holds,
With gentleness and patience,I find my way,
To a calmer mind, a more peaceful day.

By: Aishani Rastogi

दलि की गहराइयों से

वरदान

तरसत परविश श्रीमंत अरण्य
हेतु जगजाना।
अरण्य करत उद्वीपन जलवायु
ववििधि सब माना।
कहत उपनषिद प्रकृतअिति
रूपी भगवाना।
सरंक्षण व सुरछा करत एकजुट
होई वसुधैव घराना ।।
पवन, रज,अनल, अनील ,व
तत्व जीवनदाता।
तरुवरफल, धरोपज, सूर्यौरजा,
स्वशन
देवत परपिूर्ण संसाधन
जीवनरिवाहा।।।
मनुसंतान जीवन एक उद्देशा,
उपयोग करत संसाधन, सुरच्छा
करत अनमिषा।

प्रकोप

समुद्र की लहरों का उछाल
रौद्र रूप धाड़न की है ।
इन हवाओं की ऊष्मा की मलाल
हृदय की दर को काम रही है ।
वशिालकाय उधान छपिकली के
स्वभाव
व बदमलों की तांडव निगाहों को
डरा रही है ।
मेघ की रोष ,
अम्ल वर्षा की संकेत दर्शा
रही है ।
प्राकृतकि की नकारात्मक
उर्जा
अपनी प्रकोप बड़ा रही है ।
इन अपघाती प्रकार्ति
प्रक्रयिा को देखकर ,
इस बीच खड़ा एक मनुष्य मंद
मंद मुस्कुरा रहा है।

By: रतिश चौबे

दलि की गहराइयों से

समय की धारा

हे प्रभु!
खड़ा हूं तेरे दर पर शीश झुकाकर,
वनिम्र, ववेक,सुशील व संकल्पति होकर।
मांगुगा कुछ नहीं, बस पढ़ लेना
मेरे दमिाग के अंदर जाकर।
मत देना ओ आशीर्वाद जो मथि्या लगे,
सुहृदय,आशावादी व कर्मवादी ,
बना देना मुझे अपना शषि्य बनाकर।
हे दाता!
देना इतना शक्तमिुझे कि
कर सकू जरूरतमंद की सहयोग ।
खुद के लिए कुछ पाऊं या ना पाऊं,
समाज के लिए बन जाऊ एक उपयोग।।
हे ईश्वर!
सहज सी ज्ञान है मेरी,
सहजता से इसे वसि्तार की अभलिाषा है।
सयंम रख कर्मनषि्ठ होने की ,
बस अभलिाषा है ।
बस अभलिाषा है।।

जग बंधी मोह की धागा से
वयिोग बनी वरिासत है।
काल की कालमिा ,
हर दशिा में वरिाजत है।
वर्षो की कर्कश प्रयास ,
और मन की आतंरकि चाह
सब मानो धूमलि हो जाता है,
जब सामने तन और मन की
बछिोह नजर आता है।
कल्पना मात्र से हृदय ठठिुर जाता है।
जब धमनी की धड़क , हृदय की चाल
एकाएक तजे हो ,रूक सी जाती है।
उस क्षण ख्याल मात्र इतनी सी आती है,
कुछ पल का मेहमान हु,
और कुछ पल में,
नींद गहरी आ जाती है।

By: रतिश चौबे

दिल की गहराइयों से

By: आदित्य पांडे

न सोचता हूँ रातों को ,
न दिन का मुझको है पता ।
ये आग कैसी जल रही ,
ये तन बदन है लापता ।
खुद ही मै खुद से लड़ता हूँ ,
क्या लिखता हूँ क्या पढ़ता हूँ ।
माँ मेरी भी है आस मे ,
बैठेगा मेरे पास मे ।
वो बाप मेरा है खड़ा ,
हर पे मेरे लड़ा ।
वो बहन मै जिसकी जान हूँ ,
मै जिसका स्वाभिमान हूँ ।
खुद से भी खफा खफा ,
हर मोड पे रफा दफा ।
क्या खतम हुई वो आग भी ,
न साथ है वो रागिनी ।
हूँ सोचता की होगा क्या ,
हूँ खोजता मिलेगा क्या ।
हर बात पे मै मौन हूँ ,
खुद पूछूँ खुद से कौन हूँ ।
धन धान्य से पारपूर्ण मै ,
हुआ खुद मे ही चूर मै ।

वो लक्ष मेरा है शखिर,
लेकर मै जिसको जाऊ घर ।
माँ की भी आँखे भीगी हो,
हो बाप का ऊँचा सा सर ।।
मै काल से लड़ जाऊंगा,
वो लक्ष छीन लाऊंगा ।
मुट्ठी मे होगा आसमां,
देखेगी खुश वो होगी माँ ।
मै जानता हुं साथ है,
मेरे सर पे तेरा हाथ है ।
पीछे ना अब मुड़ऊँगा मै,
बस लक्ष पे रूकूँगा मै ।
बस लक्ष पे रूकूँगा मै ।।

खोया मैं

Technical Papers Submitted by Students

Review of low cost micro remotely operated underwater vehicle

Ravendra Singh Prithviraj Sarkar Rajan Yadav Vibhu Goswami

Abstract

This paper investigates and reviews the modeling and designs of ROVs, as well as their control systems, and attempts to draw on their limitations in terms of structure, durability, and ease of handling while keeping the economic factor in mind. The Remotely Operated underwater Vehicles (ROVs) are specially designed robotic systems that can be deployed on or below the water's surface to perform various studies and tasks in treacherous offshore circumstances. These ROVs are equipped with different devices and sensors, such as camera, propulsion system, sonar devices, temperature measurement units, counter balance, ballistics, and sensors, to analyze the data collected. The purpose of this article is to analyze the evolution of various available ROVs and the control strategies used in their design, as well as their merits and demerits. It also identifies the primary issues associated with ROVs.

Grid-Tied Single Phase Dual Stage Solar Power Inverter With Phase Lock Loop

Aman Singh
1900970210014

Aditya Kumar Chaudhary
1900970210005

AbhishekVerma
1900970210003

Abstract

This paper deals with a control grid-connected single-phase solar photovoltaic (PV) using MPPT and a phase lock loop (PLL). MPPT is implemented in this paper, it maintains continuous voltage at the output of DCDC. Phase-locked loop (PLL) is a method that is used in solar photovoltaic panels to synchronize the output voltage and phase with a connected grid. It is a closed loop control system that generates a power supply with phase and frequency that is related to the user input power means grid supply. PLLs have a very wide range of applications, which includes clock generation, frequency synthesis, and modulation in inverters used for DC to AC conversion. A PLL is used to match the frequency of an output inverter to the frequency of the grid used in a household.

Optimizing Electric Vehicle Charging Station Placement in Urban Areas: A Data-Driven Approach

Mridul Shukla
1900970210048

Deepak Kumar Singh
1900970310065

Abhishek Kumar Singh
2000970219001

Ashwani Yadav
1809721018

Abstract

This paper presents a new method for determining the best locations for electric vehicle charging stations in cities. The proposed optimization model uses data analysis and machine learning techniques to predict the demand for charging stations based on various factors, including driving patterns, population density, and the distribution of commercial and residential areas. An optimization algorithm then identifies the optimal placement of charging stations that can meet the predicted demand while minimizing infrastructure costs. Simulation studies demonstrate that the proposed model provides a more efficient and cost-effective deployment of charging stations when compared to existing approaches.

Pi Based Controller for Bi-Directional Energy Flow from EVB to Grid and Grid to EVB

Ankita Maurya
1900970210018

Akhsat Gupta
1900970210012

Hritik Dwivedi
1900970210042

Akrati

Abstract

A Proportional- Integral (PI) controller configuration is proposed here for controlling the charging current and voltage of a battery. The configuration is developed in two phases. In the first phase, a single-phase bidirectional AC -DC converter is utilized to transform 230 V, 50 Hz AC supply into 380 V DC. And in the second phase, a bi-directional Buck- Boost DC-DC converter is used for charging and discharging PHEV's (Plug-in Hybrid Electric Vehicle) battery. This configuration gives a significant added feature to the controller while being in discharging mode. It may also feed-back the discharged electricity to the grid at 230V, 50 Hz. it may help the grid deal with the power demand during pick-load hours especially when the battery is not in use.

A Robust Hybrid Deep Learning Model for Wind Power Forecasting

Pulkit Kushwaha
1900970210059

Naman Gupta
1900970210050

Shubhankar Pandey
1900970210081

Ojas Sraran
1900970210053

Niyanata Pandey
1900970210052

Abstract

Globally, the energy fabric is changing towards renewable energy alternatives. The reason for this shift lies in the inherent drawbacks of fossil fuel utilization for energy generation. These resources are perishable in nature and have hazardous effects on the environment. Among renewable energy alternatives, solar and wind power are approximately available in every corner of the world. However, their inherent dependency on local climate conditions, makes these energy sources unreliable for energy grids. Wind power is a promising form of renewable energy but the uncertainty of the availability of an adequate amount of wind energy every day is a challenge for using it as a reliable source of energy. An effective solution to limit this issue is to forecast wind power.This work focuses on providing an effective deep learning model for wind power prediction and the outcome of the present work also compares and validates the nobility of the proposed model on different performance matrix.

Differential Lossy Integrator using FTFNTA

Kumar Amarjeet
1900970210045

Yash Dixit
1900970210095

Abstract

Using a Four Terminal Floating Nullor Transconductance Amplifier (FTFNTA), this publication proposes a novel electrically controllable differential lossy integrator. A single FTFNTA is used as the Active Building Block (ABB), together with a single resistor and a single grounded capacitor complete the circuit. Because of the grounded capacitors, this circuit may be used in integrated circuit design. The application of proposed circuit as triangular wave generator and 1st order low pass filter is also demonstrated. All simulations are carried out using the PSPICE simulator, and the simulated results are used to validate the theoretical interpretation.

Speed Analysis of BLDC Motor by Implementation of Fuzzy Logic Based PID Controller

Ajit Singh Yadav
1900970210008

AdityaYadav
1900970210004

Aameen Mehdi
1900970210001

Anusha Pal
1900970210024

Abstract

Brushless DC motors are some of the most intriguing of all drives because of their torque characteristics and efficiency. Additionally, they provide the benefits to be DC supplied while removing the drawbacks of using brushes. An improved Fuzzy PID controller was designed to control a Brushless DC motor's acceleration and speed. Traditional PID controllers cannot be used with dynamic load systems due to the higher steady-state data rate and decreased performance that follow from their implementation. To smooth the parameters and achieve acceptable control characteristics, a classic, standard PID controller is required. This study apply & examines the results of using a fuzzy PID parameters to handle the speed of a BLDC motor.

Tree Shaped Wind Turbine

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Abstract

In the field of inventions each and everything in technologies is becoming small and efficient. Thus to make wind mills in small and compact size also we need such kind of implementations. We can install these kinds of tree shaped wind mills in the backyard of our house or in small areas to generate power. In this the turbine is designed in the shape of a tree and to take small space and generate power in small places to replace traditional windmills which take a large piece of land for their foundation. The energy generated from the turbine attached to the leaf shape structure will be stored in battery which can be used in rural areas and by small consumers

Review on Different Memristor Emulator Models and Its Current Trend

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Abstract

This study has explored the fundamental theory of ongoing development such as memristors, as well as their models and I-V characteristics. They have a wide range of possible applications in several technical areas. The latest application in engineering is introduced neuromorphic. Non- volatility, high scalability, leakage current close to minimum, and compatibility with CMOS technology are just a few of the benefits of memristive devices. The literature review covers major discoveries and research milestones in this field since the invention began.

Suspicious Object Tracking With Yolov3 with Python Using Open-CV

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Himanshu Shekhar
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Abstract

Object tracking system is essential for the surveillance of the suspicious abandoned objects. Tracking of the suspicious abandoned object is widely used in many areas such as airports, railway station and on its track, parking lots and public transportations to prevent terrorism and avoid the incident related to it. Precise recognition of the abandoned objects in an image arena can detect many applications using different vision algorithms. In this research paper, we present a multi-object tracking model along with left over baggage detection in a real time environment. In this article, we present the analysis of track-by-track methods, including the YOLO track and the SORT algorithm track. This article contains details about a procedure dataset of image edify with YOLO for 6 specific category, which is cumulated in videos for detection by the SORT algorithm.

Handwritten Character Recognition Using Machine Learning

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Abstract

Within the domain of pattern recognition, the automated identification of handwritten characters or symbols presents a complex handwriting recognition challenges. In this paper, a novel methodology is presented, which employs machine learning techniques to achieve accurate and efficient handwritten character recognition. The proposed method utilizes artificial neural networks (ANN), specifically convolutional neural networks (CNNs), to train a model capable of accurately recognizing and classifying handwritten characters. Experimental results demonstrate that the proposed approach achieves an impressive accuracy of 98.6% on a standard dataset.

A Research on DNA and RSA Cryptography for Hybrid Encryption and Decryption for Cloud Processing via IOT Devices

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Abstract

A hybrid cryptosystem is developed in the paper “Hybrid Data Encryption and Decryption Using Hybrid RSA and DNA” by combining the advantages of asymmetric-key (public-key) and symmetric-key (private-key) cryptosystems. These two types of cryptosystems use a variety of key types. The approach addresses worries about the users’ right to privacy, authentication, and accuracy by using a data encryption procedure that is secure both ways. Data encoding and data decryption are two separate security techniques used by the system.

Assessment of Different Deep Learning Models for Hardware Requirements and Pre-Processing Steps for Efficient Wind Power Forecasting

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Abstract

Wind power generating systems are increasing their presence in the whole energy fabric. However, intermittent energy production by wind power plants due to its environmental dependency poses a threat to the energy grid. To address this challenge of uncertainty, auxiliary energy storage units or accurate and reliable forecasting are two potential solutions. However, integration of energy storage units will increase the capital investment and in turn, will decrease the return on investment of wind power plants. So, an accurate forecasting mechanism is the most promising way to address the challenges of uncertainty.

Suspicious Object Tracking by Frame Differencing with Backdrop Subtraction

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Himanshu Shekhar
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Manish Kumar
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Abstract

In order to prevent terrorism, tracking of objects by stationary surveillance cameras is frequently employed for security in public spaces including railway stations, airports, parking lots, and public transit. Many applications for accurate object detection in visual scenes may be found utilizing various vision algorithms. In this paper, we describe a model for monitoring many objects simultaneously with the identification of unclaimed luggage in a real-time setting. I recreated the backdrop scene from the original frame in this model. After that, we detected and followed moving items like people and parcels using a background-subtracted motion model.

An Intensive Technical Analysis of Home Automation using IOT with Node MCU

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Abhishek Verma
1900970210003

Abstract

Home automation has become an ever-increasing number of well-known lately. It targets assisting individuals with dealing with home appliances openly and constructing an autonomous climate in the home. The Internet of Things (IoT) with remote control is an innovation that computerized basic home administrations and choices overall over the Web utilizing PCs or cell phones. Associating home apparatus electrical gadgets with the web or distributed storage can bring about home automation. The Internet of Things (IoT) is an augmentation of the webserver to give correspondence, association, and inter' networking between different gadgets or physical objects also known as "Things". Node-MCU is the most important component of this system and it can proceed as a miniature web server it goes probably as a mark of cooperation for the extensive variety of hardware modules. To control lights, fans, and other home machines which are associated with the handoff framework, the framework offers exchanging functionalities. This task expects to carry out a voice control home computerization framework utilizing a framework that is executed utilizing common domestic devices.

Fire Fighting Robot With More Accuracy and Implementation Using Arduino Uno

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Abstract

Nowadays technology is growing with rapid speed and we are becoming familiar with the technology more and more. We are surrounded by various equipment and the risk of failure of these types of equipment is always a concern. As these equipment contain various circuits and due to which if any kind of failure occurs it can cause a fire. Now to tackle these problems we need technology like fire fighting robots. With the help of these, we can replace human effort and can decrease the chance of human loss. This Robot uses different sensors, microcontrollers like Arduino UNO, circuits, and motors.

A novel method of ATM Anti-theft Design using System on Chip

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Abstract

The idea of designing the Automated teller Machine security/Anti-theft system originated with the observation of real-life incidents which are prevalent around us. As the number of ATMs has been increasing abruptly, there is an obvious shortcoming in the securities of the ATMs. This ATM anti-theft system deals with robbery prevention which occurs at ATMs and is reported very lately thus helping the security agency to catch the culprits. This system is made using Embedded System (SOC) Therefore to overcome this issue of late reporting and delayed investigation, this project came to light. Thus if something fishy happened with the money tray in the ATM, the system gets activated

Fruit Recognition System Using MATLAB

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Ayush Singh
1900970210032

Abstract

The study uses a dataset made up of distinct kinds of fruits to suggest an automated system for classifying fruits. The fruits were photographed using a regular camera to create the dataset, which was then used to examine the fruits' colour (using the RGB colour space), structure, and texture. To find the classifier that offers the highest level of accuracy, the fruits were classified using a variety of classifiers. The article used the Gray Level Co-occurrence Matrix (GLCM) method to determine the texture characteristics. The study's final finding is that a support vector machine (SVM) classifier produced the greatest accuracy. Using MATLAB, the full fruit categorization procedure was carried out.

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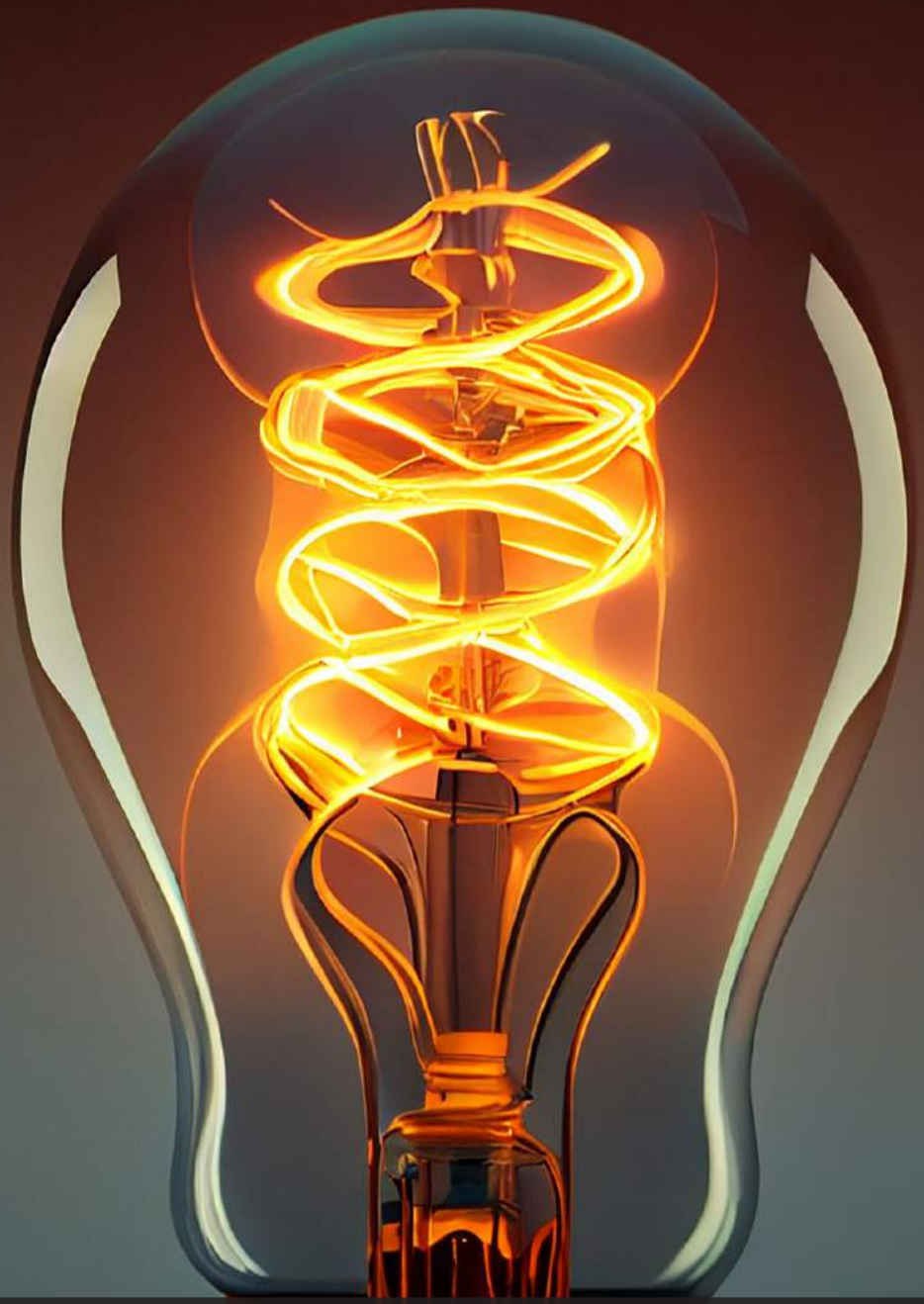

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