

# THE ELEKTRON

THE ECE TECHNICAL MAGAZINE

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2022-2023



**Editor : SAMRUTH SRIRAM D, II - ECE**



**Education** helps to develop critical skills like Decision-making, Mental Agility, Problem-solving, and Logical thinking.

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01.

## **ENTREPRENEURSHIP**

An **Entrepreneur** is someone who has an idea and who works to create a product or service that people will buy, as well as an organization to support that effort.

02.

## **SPORTS**

**Sports** pertains to any form of competitive physical activity or game that aims to use, maintain or improve our physical ability

03.

## **ART**

**Art** is a diverse range of human activity, and resulting product, that involves creative or imaginative talent expressive of technical proficiency, beauty, emotional power, or conceptual ideas.

04.

## **PHOTOGRAPHY & ARTICLES**

**Photography** is an austere and blazing poetry of the real.

An **Article** is a piece of writing which explicates ideas, thoughts, facts based on a particular topic.

# VISION AND MISSION

## VISION OF THE INSTITUTION

Transform lives through Education and Research

## MISSION OF THE INSTITUTION

To impart quality education to students through critical thinking, creativity, leadership and the spirit of entrepreneurship

## VALUES OF THE INSTITUTION

We develop in each member the ability and passion to work effectively for the betterment of humanity with cultural awareness, high ethical and moral values and a sense of social responsibility

## DEPARTMENT VISION

To produce globally competent Electronics and Communication Engineers.

## DEPARTMENT MISSION

**M1** : To impart value-based technical education with a state of art technologies to meet industry standards

**M2** : To foster critical thinking and creativity through research and experimentation.

**M3** : To prepare our students to be a lifetime professional with creativity and leadership

## PROGRAM EDUCATIONAL OBJECTIVES (PEOs)

**PEO 1** - Shall pursue higher education and research, or have a successful career in industries or as entrepreneurs.

**PEO 2** - Shall have the ability and attitude to adapt to emerging technological changes.

**PEO 3** - Shall exhibit leadership abilities, professional ethics, communication skills, interpersonal skills and life-long learning.

## PROGRAM OUTCOMES (POs)

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

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

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

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

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

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

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

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

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

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

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

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

## PROGRAM OUTCOMES (POs)

Students of the Electronics and Communication Engineering Program

**PSO 1** - Shall have Potential to analyze, design, synthesize and provide technical solutions in the field of VLSI, Embedded Systems, Communication, Networking and Real Time Processing.

**PSO 2** - Shall exhibit leadership skills and pursue entrepreneurship and contribute in the field of Electronics and Communication Engineering.

# MESSAGE FROM DIGNITARIES

## PRINCIPAL'S MESSAGE

I am delighted to extend my warmest greetings to you through the latest edition of The Elektron. This magazine serves as a vibrant reflection of the energy, innovation, and excellence that define our ECE department. As we continue to navigate through an era of rapid technological advancement, the ECE department remains at the cutting edge of research and education. The Elektron highlights the remarkable achievements and initiatives of our students, faculty, showcasing how we are pushing the boundaries of electronics and communication. Thank you for your unwavering commitment and enthusiasm.

## DEAN'S MESSAGE

It is with great pleasure that I address you in this special edition of The Elektron. As the Dean of CARE College of Engineering, I am incredibly proud of the strides our ECE department continues to make. The Elektron serves as a remarkable platform to showcase the exceptional work and achievements of our ECE community. Thank you for your continued passion and commitment. Let's celebrate the achievements featured in The Elektron and look forward to even greater accomplishments to come.

## HOD'S MESSAGE

I am thrilled to present the latest edition of The Elektron, our Electronics and Communication Engineering (ECE) department's magazine. This issue is a testament to the remarkable achievements and innovative spirit that define our department. I encourage you to explore the diverse and engaging content within The Elektron. It is a celebration of our collective achievements and a reminder of the impact we are making in the world of electronics and communication. Thank you for your dedication and enthusiasm.

# EDITOR'S MESSAGE

The Editor's position is critical for the publishing of the College Magazine. It is very encouraging for the faculty and students of the ECE Department, CARE College of Engineering to launch the Department Technical Magazine "**THE ELEKTRON**".

**As an Editor**, I made every effort to include **Interesting Articles, Experiences, Art Clippings, Student Thoughts**, and so on. I am thankful to the **CEO, Principal, Dean, and HOD(ECE Department)**, CARE College of Engineering for this opportunity, as well as to all of the staff members who helped me finish this Technical magazine on time. I am also thankful to the entire Student Community for delivering the content on time

Some of the sections were to be evaluated in terms of quality. I am optimistic that in the future, we will be able to produce such a Magazine that represents the Creative Quality of the Students Community as a whole. It is our sincere request to all readers to read, appreciate, and provide feedback to the Editorial Board since I have no prior experience in this and this is my first Magazine hence errors in the magazine can be minimized and the committee can enhance the magazine's standard in the future.

I would also like to thank **Mr.V.Meganath** of **ECE Department** for his dedicated efforts toward ensuring the success of the magazine.



**CHEIF EDITOR**

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**SAMRUTH SRIRAM.D**  
**II YEAR - ECE**

A scenic mountain landscape with a person standing on a peak in the distance. The sky is filled with large, white, fluffy clouds. The mountains are covered in green and brown vegetation. The text is overlaid in a yellow, hand-drawn font.

THE BEST WAY  
TO PREDICT THE  
FUTURE IS TO  
CREATE IT





# SMART INDIA HACKATHON 2022

We a Four-membered team of students participated in the **"SMART INDIA HACKATHON 2022"**, conducted at **A.D. PATEL INSTITUTE OF TECHNOLOGY, Gujarat**. It was a 5-day long program.

The First Day began with the Inauguration of **"Grand Finale of Smart India Hackathon 2022"** enlightening the Significance of the event and Speech by Dignitaries. Later, we were informed regarding the Rules and Regulations to be followed and the Schedule of the event. There were two Sessions per day namely **Mentoring Session** at Morning and **Evaluation Session** at the Evening.

The Mentoring sessions held for about 7-10 min that dealt with the corrections and tips by the judges for the betterment of the project. While the Evaluation session (10 min approx.) forms the Main Phase as the Daily progress of the project has been delivered based on which the Marks were assigned.

The Criteria for Evaluation was based on the **Day-by-Day progress** followed by the efficient use of the components provided and the Innovation in the Project. There were also some Cultural events conducted at evenings reflecting their own lifestyle of living.

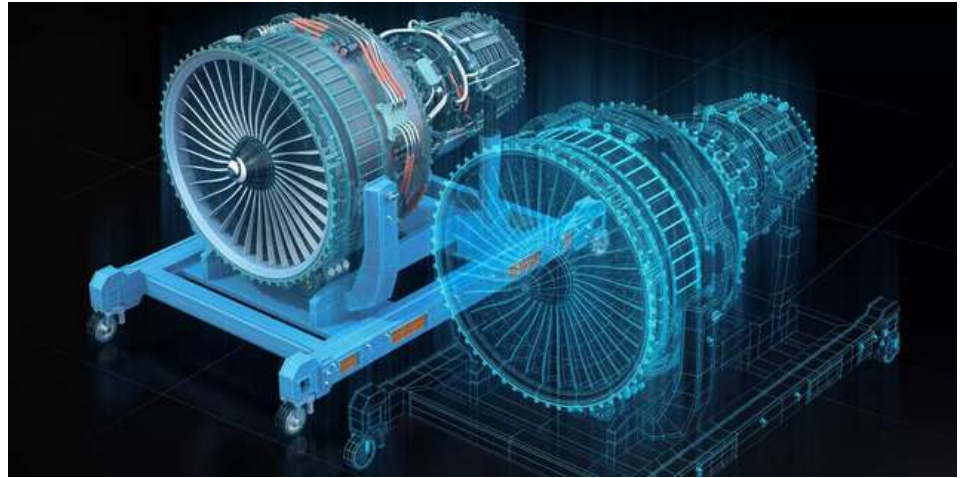
The **End of the event** marked the Finalization of Results, Valedictory session and the Prize distribution Ceremony. In addition to the Project, we came across people practicing different culture, food habits, environment, etc...., which forms the favourite part in the entire journey of Hackathon.



**SAMRUTH SRIRAM.D**  
**II YEAR - ECE**

# DIGITAL TWINS

REVOLUTIONIZING THE FUTURE OF INDUSTRY



In an era where digital transformation is reshaping industries, the concept of digital twins has emerged as a game-changer. Digital twins are virtual replicas of physical objects, processes, or systems, providing real-time insights and facilitating better decision-making. From manufacturing to healthcare, digital twins offer a myriad of benefits, revolutionizing how businesses operate and innovate.

## *ENHANCING OPERATIONAL EFFICIENCY*

One key advantage of digital twins is their ability to enhance operational efficiency across various sectors. By creating virtual models of physical assets or processes, organizations can simulate different scenarios, predict performance outcomes, and optimize operations. For instance, in manufacturing, digital twins enable predictive maintenance, minimizing downtime and reducing costs associated with equipment failure.

## *FACILITATING PREDICTIVE ANALYSIS*

Another significant aspect of digital twins is their role in facilitating predictive analytics. By continuously collecting data from connected sensors embedded within physical assets, digital twins provide valuable insights into performance trends and potential issues. This proactive approach allows businesses to anticipate maintenance needs, mitigate risks, and improve overall productivity.



**MEGANATH V**  
**II YEAR - ECE**

# SWING TRADING



## What is Swing Trading ?

**Swing Trading** is a style of trading in which traders seek to profit from the **Price swings** of financial assets, such as stocks, currencies, or commodities. Unlike day trading, where traders buy and sell assets within a single day, swing traders hold their positions for several days or weeks, taking advantage of **short-term price fluctuations**.

## Attributes of Swing Trading

Swing traders use Technical Analysis to identify trading opportunities. They look for Chart Patterns, such as support and Resistance levels, Trend lines, and moving Averages to determine **Entry** and **Exit** points for their trades.

They also use **Indicators**, such as **Relative Strength Index (RSI)** or **Moving Average Convergence Divergence (MACD)**, to confirm their trading signals.

## Characteristics of Swing Traders

Swing trading requires a certain level of skill and experience, as traders need to have a good understanding of technical analysis, risk management, and market psychology. It also requires Discipline and Patience, as traders need to wait for the right trading opportunities and stick to their **Trading plan**.

Overall, swing trading can be a **profitable** strategy for traders who are willing to put in the time and effort to learn the necessary skills and develop a sound trading plan. However, like any trading strategy, it carries risks, and traders should always be mindful of their risk tolerance and the potential losses they could incur.

## Blog Link

<https://vigneshgovindharaj2003.blogspot.com/2023/03/swing-trading.html>



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**VIGNESHWARAN.G**

**III YEAR - ECE**

# — Exploring The Metaverse

## *Shaping the Future of Virtual Reality*

The metaverse, a term coined by science fiction writer Neal Stephenson in his 1992 novel "Snow Crash," has transitioned from fiction to a tangible concept with profound implications for the future. In essence, the metaverse refers to a collective virtual shared space, created by the convergence of physical and virtual reality, where users interact with each other and digital objects in real-time.

At its core, the metaverse represents the next frontier of human interaction, offering immersive experiences that transcend geographical boundaries. From virtual worlds and social platforms to immersive gaming environments, the metaverse promises to work, and play.



One of the key applications of the metaverse lies in social interaction. As traditional forms of communication evolve, virtual spaces enable people to connect and collaborate in unprecedented ways. Whether attending virtual meetings, hosting events, or exploring virtual environments with friends, the metaverse fosters social connections that transcend physical limitations. In conclusion, the metaverse represents a paradigm shift in how we perceive and interact with digital technology.



**SUDHARSAN R  
II YEAR - ECE**

# THE FOOD CORNER



## FoodCorner ?

### Complete Online Solution

Our Online Ordering Solution allows you to take orders through Your own Website, Your Own Mobile App, And through FoodChow website and Mobile App.

### Worldwide Support

FoodChow support is available worldwide. Contact our support team and we'll connect you to an expert to get your issue resolved within 24 Business hours.

### Single & Multiple Outlets

Do you have your restaurant in multiple locations? FoodChow Multi-outlet food ordering solution will help you manage all these outlets with Super Admin functionality.

## PROJECT SUMMARY

- **FOOD CORNER** is a Web Application that is designed for **Ordering food**.
- **FOOD CORNER** is very similar to the famous Food service apps like **Zomato** and **Swiggy**.
- It is a very Responsive one, that could be accessed by either installing the app to your **Smartphone** or simply by visiting its **Webpage**.

## Software Recruited

- o VS Code
- o Sublime text

## Programming Languages

- HTML
- CSS
- Java Script
- React JS
- Bootstrap
- Tailwind CSS

## Description

The **React JS framework** was used to create the Food Corner Website. **Bootstrap** was used to build the website's Frontend design. The Bootstrap framework makes it simpler when used on mobile, laptop, smart TV, and various other devices. The website has been split into multiple pages. We can browse through those website pages using the **React Router Dom module**.

From the customer's perspective, if the user purchases food from the Food corner. The purchased food data is stored in the **Database**, and information is further transmitted to the admin. Admin examines the order's information and prepares it for delivery.

## Blog Link

<https://balamurugan-d3753.web.app/>



**BALAMURUGAN.K**

**III YEAR - ECE**

# SPORTS



DON'T BE  
AFRAID OF  
FAILURE

# KABADDI SOUTH ZONAL 2022

I am Krishnamoorthy, a Third-year ECE student, and I have participated in the **Kabaddi South Zonal Match 2022**. We had a crew of 12 people.

We started out with barely any time to practice, so we worked very hard with the assistance of our P.E.T. teachers of **CARE college of Engineering**, who have been supporting and encouraging us in all ways possible. We were ecstatic about being a part of the match. Our team members were not experts, but they were very passionate in playing Kabaddi.

To reach the finals, we have to compete against three teams in three separate rounds. The first round was between us and the students from **Shivani College of Engineering and Technology, Trichy**. We had put on our full efforts that had propelled us to the Second Round.

The **Government College of Engineering, Trichy**, was to participate in the second round. Despite our greatest attempts, we were defeated in the struggle. This devastated our hearts. Despite losing the battle, we gave the opponent a difficult time competing with us.

Although we lost the battle, the audience felt that our game plan and the way we struggled were incredible. Being a part of a competition like this made us and our college extremely proud. Our heartfelt gratitude goes to our physical education teachers and all other staff members who are accountable for our involvement in the tournament.



**KRISHNAMOORTHY.V**  
**III YEAR – ECE**

# “LET THE FEET DO THE TALKING”

I am Arasu.C, and I am a second-year student in the Electronics and Communication Engineering Department. I am delighted to share my experience on our visit to **Anna University, Trichy** for a football match.

I am neither a professional nor a novice in football. Football, on the other hand, captivates me. Every day after college, I heard my friends chatting about the game they had in their evening playtimes, and we also watch football matches, which piqued my curiosity in learning the game.

I began learning football at the very beginning of my first year. The P.E.T teachers of CARE College of Engineering helped me a lot to flourish in my favourite sport. I used to practise every day. I genuinely enjoyed learning it because I had my own peer group and a kind P.E.T teacher to motivate me.

***"If you study well, you acquire information; but if you play every day, you develop Discipline," he used to say.***

I had numerous challenges in my few days, but I always had my friends by my side to cheer me up and motivate me in many ways, so I didn't lose hope. My primary motivation for working more and harder was my self-interest. This let me to compete in a football game held at Anna University, Trichy.

That was the first game where I felt like a professional player. With a lot of energy, the game began. We had the impression that we were competing in a competition against nations from around the world. We were quite enthusiastic and had a great time throughout the first half of the game.

The second half of the game, when we had to battle for a sizable advantage, ended up being the most difficult. To our dismay, despite our best efforts, the game ended in a draw and we were defeated. One of the spectators from the crowd claimed it was a heart-pounding event for them and that we kept them astonished the entire game which is a stepping stone for a beginner like me.

Even though we lost the match, it was a great experience for us to take part in such competitions. Our opponents, against whom we fought, said that the match was almost the tenth of their careers, and they have worked tirelessly for it. Having to hear such words from them gave us more confidence and inspired us to work harder and accomplish more.

I'd like to end this with a significant note:

***"Your determination and hard work are essential to excel in any sport."***





# The Art Architects

A hand holding a paintbrush with colorful splatters on a black background. The brush has a yellow handle and a white ferrule. The background is black with numerous small, colorful splatters of paint in shades of yellow, orange, blue, and white. The hand is positioned in the center, holding the brush vertically.

Get your  
Aesthetic  
Enjoyment



**DHARUNIKHA.M**  
**II YEAR - ECE**

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**AJAY KUMAR.K**  
**III YEAR - ECE**



**KAYAL VIZHI. R**  
**II YEAR - ECE**



**DIVYA DHARSHINI.G**  
**II YEAR - ECE**

# PHOTOGRAPHY

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GET OUT THERE AND LIVE A LITTLE

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**"IF YOU CAN SEE IT,  
YOU CAN SHOOT IT."**

# MY JOURNEY OF PHOTOGRAPHY

Photography is a unique art form that allows us to capture and preserve moments in time. From the perfect shot to the imperfect, photography has the power to tell a story in a single image.

I'm Hanish.K.A from the Second Year ECE Department at CARE College of Engineering. I am an active member in the Photography Club.

Being a part of this club was really an enjoyable one. This photography club has taught me a wide range of skills, from beginner to expert level.



I was not aware that, there are numerous options that must be considered while capturing, such as ISO, brightness level, and so on. Usually, teachers demonstrate how to take photographs using a high-resolution and high-quality camera.

But here, they showed us how to capture a scene or portrait using just a mobile phone in such a way that it appears to have been captured with a high-quality camera.

In this document, I have added a few sample photos that I personally shot with my normal smartphone.



**HANISH.K.A**  
**II YEAR - ECE**

# DEPRESSION

## “A NEW FRIEND AND A TREND”

We have experienced a lot of stress and difficulties in our lives, particularly when we were teenagers. We become uninterested in everything when we are depressed. It appears as though your joy was put to death.

Here are the main reasons that typically cause depression.

- **FAMILY**

Given the challenges you have encountered in your tenth and twelfth high school years, you might be surprised to discover that this is accurate.

- **FRIENDS**

You might have a large social circle. But when it comes to devotion, it utterly fails. Some of your pals may turn out to be fake; they will utilize you for their own benefit and then discard you after they no longer require you.

- **INFERIORITY COMPLEX**

Your Inferiority complex is the primary contributor in depression that diminishes your confidence in your ability of interacting with individuals. As a result, you lose all strength and sink into a depressive state out of which you won't ever recover.

- **FAILURES**

But who do you think would agree with the adage, "**Failure is the First Step to Success**"? Those around you would recognize you when you achieve something big.

Considering the instances I provided above, you would prefer to give yourself permission to consider the query, "How can I overcome this depression?" Is depression a severe psychological condition?

I am aware of how challenging depression can be because I have experienced it. I've employed it in a variety of circumstances, and I'd like to offer you some guidance or tips that might help you in escaping certain situations that enhance depression.

### **FAMILY BACKGROUND**

You might believe that possessing a middle or lower-class family background is the most adverse scenario an individual might have endured in his entire lifetime. I don't really concur with that, though; I believe you were blessed to have been brought up into those kinds of families.

A good example of this is the conversion of a hut home into an Estate. We could have encountered numerous challenges along the way, which usually add to the monotony and depression of everyday life. Find a solution to your issues before turning to more harsh medicines to treat them.

### **FRIENDS**

The most valuable relationships anyone will ever have been in is friendship. But ultimately you come to the realization that most of it turned out to be Toxic and Fake.

**Choosing friends** is a crucial decision in life. In your darkest hours, they might support you or offer assistance. However, based on my own experience, I view them as a carefully crafted and packaged good that has its own Manufacturing and Expiry dates.

This is due to the reality that you don't always bond with the right person who can understand you, like you, or seek you when you aren't around. In that case, roughly 98 percent of people would be proven incorrect, while only 2 percent of them truly have become.

I will therefore conclude this with a statement that I have written in my own calligraphy:

***"A lone wolf is preferable to a flock of phony-smiling sheep"***

## **INFERIORITY COMPLEX**

One of the primary obstacles lying in your way of success is Inferiority complex. Your whole existence and contentment would be destroyed. Who will rouse you if you don't overcome from it?

Of course, only you are capable of handling the circumstances. I understand that it's not as simple as you might assume, but you can certainly get through it gradually.

***Remember that none of them fell from the heavens!***

***Quit overanalyzing yourself and start adoring this universe.***

## **FAILURES**

The word "Failure" is actually a wonderful description for somebody who has gone through success. Of course, we all experience it occasionally. No one would ever think about squeezing you down if you Conquer your Mistakes.

***"Don't cleanse this strong gem in your tears, it's a diamond"***

**"Believe in Yourself"**, and keep remembering, you are not created to end up in an empty trash can; you were created to be on this earth for an objective.

***"Compete with yourself because only that will nourish you."***

You may have encountered individuals who detest you and disseminate false information about you. The only answer is to Ignore them and concentrate on what you really dream for; your Positive Attitude will propel you to heights you never thought possible.

With my views of depression, I would like to add up some ill effects of depression and further more steps to overcome from it.

## **ILL EFFECTS OF DEPRESSION**

- Sadness
- Anxiety
- Poor Blood Circulation
- Headache
- Hair loss
- Dread of Death

## **WAYS TO DEAL WITH DEPRESSION**

- Listening Music.
- Conversing with Genuine people
- Spending valuable time with family
- By adopting a pet of your choice.
- Having fun by engaging yourself in your favourite sport
- Reading Books

As a result, have fun and don't rely on anyone. Let us create a distinct path for the carrier and concentrate on your goals.

I'd like to conclude with a renowned saying:

***"KILL THEM WITH YOUR SUCCESS;  
BURY THEM WITH YOUR SMILE"***



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**SIVAGANAPATHY.R**  
**II YEAR – ECE**

# ANAMIKA

- a true story

Writer  
Gadireddy sameera

Gadireddy sindhu publications



## **A gift to my sister,**

Sister I don't know how to express my feelings for you. But I can tell you one thing: I have never loved anyone as much as I have loved you. Let the world know about the challenges you've encountered and are confronting in your life. Thank you for entering my existence. I portrayed Kaali in this novel, but I can't disclose anything about Anamika due to privacy concerns. I hope you appreciate reading this novel...

Anamika shrieked for over 30 minutes with no response. That unfortunate girl realized no one was going to answer the door, so she sat in the far corner of the room. Because of the gloom, she was frightened. Her eyes were dry, and she no longer cried. Her unfilled tummy made her feel even worse. She gradually fell asleep.



### **“ THE SIN”**

It had rained earlier in the day. The sky is completely black. Anamika was looking out her bedroom window at the situation. So many queries were running through her thoughts. However, no one is present to address her inquiries. Everything was quiet around him, until one arrogant voice broke the stillness. That's her mother. She orders Anamika to tidy the home. Anamika moved slowly into the living room. She is fighting back emotions when her younger sibling begins to annoy her. He is insulting and demeaning her.

Anamika quietly tolerated all of that nonsense because she knew what would happen if she reacted to her sibling. Suddenly, that little fellow spilled ink on some essential papers, and he protested to his mother that Anamika did it. Anamika's mother told her spouse of the situation. He lost it with Anamika. He began brutally assaulting Anamika. Neighbors are powerless in the Anamika case.

The sun rises, birds chirp, and smoke enters the room through the window. Anamika gradually opened her eyelids. She awoke and carefully felt her wounds, which were hurting. She made her way to the window. She was looking at the birds and picturing herself flying somewhere like a bird at that time. The door was unlocked. That is her father, she was told to make brunch. Her mother was preparing tea in the kitchen when she went there. Her mother told her what she needed to make for brunch and exited the kitchen with a tea service. Anamika finished the cooking chores. She started to college as usual.

### **BOOK WAS PUBLISHED IN AMAZON KINDLE**



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**GADIREDDY SAMEERA  
III YEAR – ECE**

