DEPARTMENT OF CSE

CARE COLLEGE OF ENGINEERING

TECH TRIP

TECHNICAL MAGAZINE

2021 - 2022

Volume -2

Prepared by

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DEPARTMENT OF CSE

CARE COLLEGE OF ENGINEERING

VISION AND MISSION

VISION OF THE INSTITUTION

Transform lives through Education and Research

MISSION 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 Create Computer Science Engineers through Quality Education and Research.

DEPARTMENT MISSION

To impart Problem Solving, Innovative and Entrepreneurship with sound knowledge in Computer Science and Engineering.

To establish a Research Centre where students can present their research ideas.

To develop Moral, Ethical Values and Social Responsibility to the students

DEPARTMENT OF CSE

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PROGRAM EDUCATIONAL OBJECTIVE (PEO'S)

PEO 1 - To enable graduates to pursue higher education and research, or have a successful career in industries associated with Computer Science and Engineering, or as entrepreneurs.

PEO 2 - To ensure that graduates will have the ability and attitude to adapt to emerging technological changes.

PROGRAM SPECIFIC OBJECTIVE (PSO'S)

PSO 1 - Analyze, Design and develop computing solutions by applying foundational concepts of computer science and Engineering.

PSO 2 - Apply software engineering principles and practices for developing quality software for scientific and business applications.

PSO 3 - Adapt to emerging information and communication technologies (ICT) to innovate ideas and solutions to existing/Novel problems.

PROGRAM OUTCOMES (PO'S)

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.

PROGRAM OUTCOMES (PO'S)

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.

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LEADERSHIP

CEO'S MESSAGE

Mr. Prative Chend B.,
CEO

am pleased to present the second volume of our Computer Science and Engineering department magazine. This edition is a celebration of the creativity, innovation, and hard work that define our community.

Within these pages, you will find an array of articles showcasing inspiring projects, insightful research, and the outstanding achievements of our students and faculty. Each contribution reflects our commitment to excellence and our passion for advancing the field of technology.

I encourage you all to engage with the content and share your thoughts. Together, we can continue to foster a culture of collaboration and innovation that drives our success.

Thank you for your unwavering support and dedication. Let us continue to inspire one another as we pursue new horizons in computer science.

Best regards,

DEPARTMENT OF CSE

CARE COLLEGE OF ENGINEERING

LEADERSHIP

PRINCIPAL MESSAGE

Dr. S. Shanthi
Principal

It is with great pleasure that I introduce the second volume of our Computer Science and Engineering department magazine. This edition stands as a testament to the hard work, creativity, and passion that our students and faculty bring to the forefront of technological advancement.

Within this volume, you will find a diverse collection of articles showcasing innovative projects, research initiatives, and valuable insights into the world of computer science.

I encourage everyone to engage with the content, explore new ideas, and participate that shape our community. Together, let us continue to foster an environment of collaboration and innovation as we navigate the ever-changing landscape of technology.

Thank you for your unwavering dedication and support. Let's strive for excellence and inspire one another as we move forward.

Warm regards,

DEPARTMENT OF CSE

CARE COLLEGE OF ENGINEERING

LEADERSHIP

DEAN R&D'S MESSAGE

Dr. A.Pasumpon Pandian
Dean R&D

II am pleased to present the second volume of our Computer Science and Engineering department magazine. This magazine serves as a vibrant showcase of the creativity, innovation, and academic rigor that define our department.

Within these pages, you will find a rich array of articles and projects that reflect the dedication and hard work of our students and faculty. Each contribution highlights our ongoing commitment to advancing knowledge and embracing the challenges presented by the rapidly evolving field of technology.

I encourage all of you to engage with the content, share your insights, and participate in the vibrant discussions that shape our academic community. Together, we can continue to inspire one another and drive forward the mission of excellence in research and education.

Thank you for your continuous support and dedication. Let us strive together for new heights in our pursuit of knowledge and innovation.

Warm regards,

DEPARTMENT OF CSE

CARE COLLEGE OF ENGINEERING

LEADERSHIP

HOD'S MESSAGE

Dr.J. Suresh,
HoD

It is with great pride that I introduce the second volume of our Computer Science and Engineering department magazine. This magazine serves as a platform to celebrate the remarkable achievements and innovative spirit of our students and faculty.

In this volume, you will find a rich collection of articles highlighting cutting-edge projects, and insightful discussions on emerging technologies. Each contribution reflects the dedication and passion that our department embodies.

As we navigate the ever-evolving landscape of technology, I encourage all of you to engage deeply with the content and share your ideas. Our collective efforts and collaborations will continue to foster an environment where creativity and knowledge thrive.

Thank you for your ongoing support and enthusiasm. Let us continue to inspire and uplift one another as we strive for excellence in all our endeavors.

Warm regards,

STEP-BY-STEP GUIDE TO USING JUPYTER NOTEBOOK

Jupyter Notebook has become an indispensable tool for data scientists, educators, and researchers. Its interactive nature makes it ideal for data analysis, visualization, and machine learning projects. This guide will walk you through the basics of using Jupyter Notebook for your next project.

Step 1: Installing Jupyter Notebook

we can download it from python.org. Next, install Jupyter Notebook using pip:

Step 2: Launching Jupyter Notebook

Step 3: Creating a New Notebook

Step 4: Understanding the Interface

Step 5: Writing and Running Code

Step 6: Using Markdown for Documentation

Step 7: Importing Libraries

Step 8: Loading and Exploring Data

Step 9: Data Visualization

Step 10: Creating Interactive Widgets

Step 11: Saving and Exporting Notebooks

Jupyter Notebook is a powerful and versatile tool that can significantly enhance your workflow for data analysis, visualization, and machine learning projects.

HARI HARASUDHAN S, IV CSE

CHALLENGES FACED DURING THE COVID-19 ONLINE CLASSROOM

The COVID-19 pandemic brought unprecedented changes to the education system worldwide. As a second-year Computer Science and Engineering student, the shift from traditional classrooms to online learning presented numerous challenges that tested our adaptability, resilience, and commitment to education.

Technical Difficulties

One of the most significant challenges was dealing with technical issues. Not all students had access to reliable internet connections or modern devices.

Lack of Engagement and Interaction

The lack of face-to-face interaction significantly affected our learning experience. In traditional classrooms, the dynamic environment fosters engagement, spontaneous discussions, and immediate feedback.

Mental Health Struggles

The lack of social interaction, increased screen time, and the pressure to adapt to a new mode of learning led to feelings of anxiety, stress, and burnout.

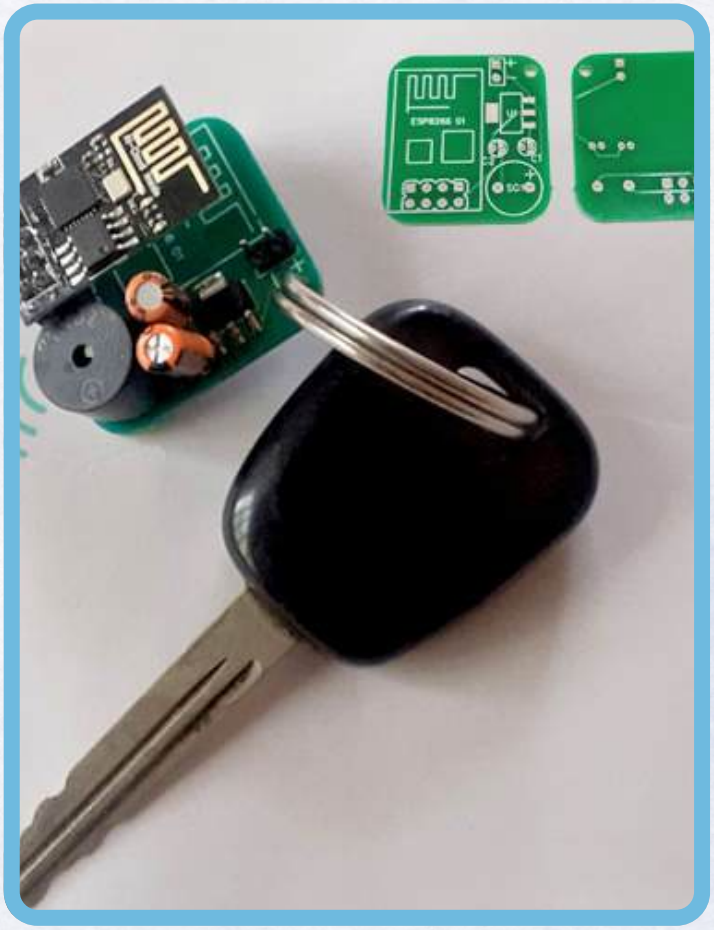
Adapting to New Learning Tools

While usingtools like Zoom, Microsoft Teams, and Google Classroom became integral to our education, mastering their use was not without challenges.

MAHESH.E, II CSE

PRODUCT DEVELOPMENT

SMART KEYCHAIN



The Smart Key Chain Project is a cutting-edge and innovative endeavor that combines technology and convenience to enhance the traditional key chain's functionality. In a world where smart devices are becoming an integral part of our daily lives, the Smart Key Chain aims to provide users with a seamless and efficient way to manage their keys while offering additional features that go beyond the conventional key holder.

Subasree B S, IV CSE

PAPER PRESENTATION

ENHANCING SUSTAINABLE ENERGY SOLUTIONS THROUGH ADVANCED PHOTOVOLTAIC TECHNOLOGIES

I presented a paper that aims to explore the latest advancements in photovoltaic (PV) technologies and their potential to revolutionize sustainable energy solutions.

As the global demand for clean energy continues to rise, it becomes imperative to leverage cutting-edge innovations to enhance the efficiency, reliability, and affordability of PV systems.

The presentation will delve into the key breakthroughs in solar energy, emphasizing the role of emerging technologies in addressing current challenges and paving the way for a more sustainable future.

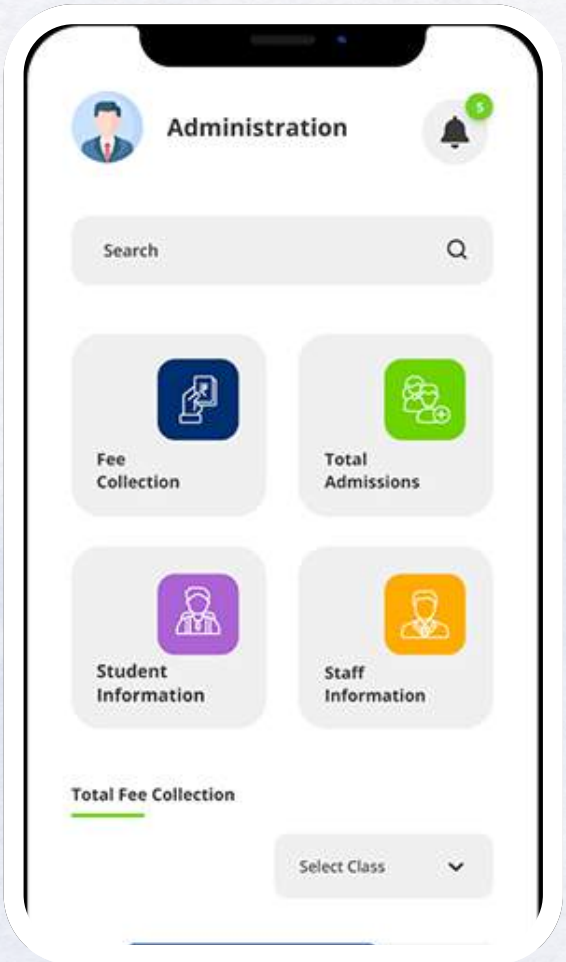
MAHITHA K, IV CSE

APP DEVELOPMENT

MOBILE APPLICATION FOR THE SCHOOL MANAGEMENT

In the fast-paced digital era, where efficiency and accessibility are paramount, the development of a state-of-the-art mobile app for school management has become a crucial endeavor.

This innovative application is designed to streamline and enhance various administrative and academic processes within educational institutions. By harnessing the power of mobile technology, this app aims to create a seamless communication bridge between students, parents, teachers, and administrators, fostering a collaborative and efficient school environment.

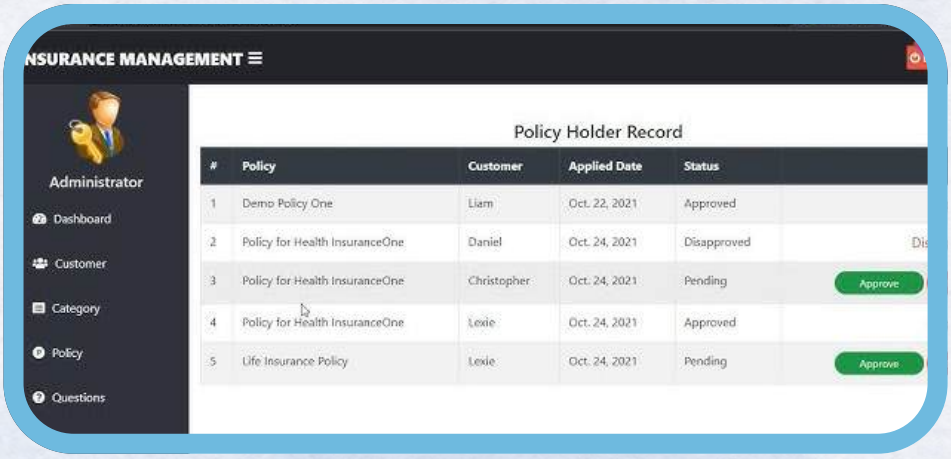


Akash N - III - CSE

WEB DEVELOPMENT

WEB DEVELOPMENT FOR EFFICIENT INSURANCE MANAGEMENT

In the fast-paced digital era, where efficiency and accessibility are paramount, the development of a state-of-the-art mobile app for school management has become a crucial endeavor. This innovative application is designed to streamline and enhance various administrative and academic processes within educational institutions. By harnessing the power of mobile technology, this app aims to create a seamless communication bridge between students, parents, teachers, and administrators, fostering a collaborative and efficient school environment.



Sandhya S - IV CSE

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Thank You