

# **SAFETY AND SERVICES IN INSTITUTES**



## **A PROJECT REPORT**

*Submitted by*

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*in partial fulfillment of requirements for the award of the course*

**AGB1211 – DESIGN THINKING**

*in*

**ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**

**K. RAMAKRISHNAN COLLEGE OF TECHNOLOGY**

(An Autonomous Institution, affiliated to Anna University Chennai and Approved by  
AICTE, New Delhi)

**SAMAYAPURAM – 621 112**

**DECEMBER, 2024**

# **K.RAMAKRISHNAN COLLEGE OF TECHNOLOGY (AUTONOMOUS)**

**SAMAYAPURAM – 621 112**

## **BONAFIDE CERTIFICATE**

Certified that this project report on “**SAFETY AND SERVICES IN INSTITUTES**” is the bonafide work of **GAYATHRI R (2303811724322030), GIRITHA P (2303811724322032), HARISWASTHRA S, (2303811724322034) INDUJA A (2303811724322036)** who carried out the project work during the academic year 2024 - 2025 under my supervision.

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Submitted for the viva-voce examination held on 5.12.24

**INTERNAL EXAMINER**

**EXTERNAL EXAMINER**

## DECLARATION

I declare that the project report on “**SAFETY AND SERVICES IN INSTITUTES**” is the result of original work done by us and best of our knowledge, similar work has not been submitted to “**ANNA UNIVERSITY CHENNAI**” for the requirement of Degree of **BACHELOR OF TECHNOLOGY**. This project report is submitted on the partial fulfillment of the requirement of the award of the **AGB1211 – DESIGN THINKING**.

**Signature**

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**Giritha P**

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**Place:** Samayapuram

**Date:** 5/12/2024

## ACKNOWLEDGEMENT

It is with great pride that I express our gratitude and indebtedness to our institution, **“K. Ramakrishnan College of Technology (Autonomous)”**, for providing us with the opportunity to do this project.

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I would like to thank **Dr. N. VASUDEVAN, M.TECH., Ph.D.**, Principal, who gave the opportunity to frame the project to full satisfaction.

I thank **Dr.T.AVUDAIAPPAN, M.E.,Ph.D.**, Head of the Department of **ARTIFICIAL INTELLIGENCE AND DATA SCIENCE**, for providing her encouragement in pursuing this project.

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I render our sincere thanks to the Course Coordinator and other staff members for providing valuable information during the course.

I wish to express our special thanks to the officials and Lab Technicians of our departments who rendered their help during the period of the work progress.

## **VISION OF THE INSTITUTION**

To serve the society by offering top-notch technical education on par with global standards.

## **MISSION OF THE INSTITUTION**

- Be a centre of excellence for technical education in emerging technologies by exceeding the needs of industry and society.
- Be an institute with world class research facilities.
- Be an institute nurturing talent and enhancing competency of students to transform them as all- round personalities respecting moral and ethical values.

## **VISION AND MISSION OF THE DEPARTMENT**

To excel in education, innovation and research in Artificial Intelligence and Data Science to fulfil industrial demands and societal expectations.

Mission 1: To educate future engineers with solid fundamentals, continually improving teaching methods using modern tools.

Mission 2: To collaborate with industry and offer top-notch facilities in a conducive learning environment.

Mission 3: To foster skilled engineers and ethical innovation in AI and Data Science for global recognition and impactful research.

Mission 4: To tackle the societal challenge of producing capable professionals by instilling employability skills and human values.

## **PROGRAM EDUCATIONAL OBJECTIVES (PEOS)**

**PEO 1:** Compete on a global scale for a professional career in Artificial Intelligence and Data Science.

**PEO 2:** Provide industry-specific solutions for the society with effective communication and ethics.

**PEO 3:** Hone their professional skills through research and lifelong learning initiatives.

## **PROGRAM OUTCOMES**

Engineering students will be able to:

- 1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2. 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.
- 3. 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.
- 4. 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.
- 5. 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.
- 6. 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.
- 7. 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.
- 8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

- 9. Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 10. 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.
- 11. 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.
- 12. 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 SPECIFIC OUTCOMES (PSOs)**

- **PSO 1:** Capable of working on data-related methodologies and providing industry-focussed solutions.
- **PSO2:** Capable of analysing and providing a solution to a given real-world problem by designing an effective program.

## **ABSTRACT**

This application is a comprehensive platform designed to improve campus safety and streamline access to essential services. Users can report issues, request services such as counseling, medical assistance, or facility repairs, and communicate directly with relevant departments. The app also features quick access to emergency contacts, announcements for health and safety updates, and a resource section for guidelines and support information. By fostering efficient communication and prompt issue resolution, the app creates a safer, more supportive, and well-maintained campus environment for all. It fosters a culture of proactive safety and care by leveraging technology to meet the needs of the campus community efficiently.



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# **CHAPTER 1**

## **INTRODUCTION**

### **1.1 INTRODUCTION**

This Application is a digital solution aimed at improving safety and accessibility to support services within educational institutions. It empowers users to report issues, request assistance for counseling, medical needs, or facility repairs, and access emergency contacts with ease. This app ensures a secure and supportive campus environment by fostering efficient communication and timely service delivery.

### **1.2 PROBLEM STATEMENT**

Educational institutions often face challenges in maintaining a secure and well-supported environment due to inefficient communication channels, delayed issue resolution, and lack of streamlined access to essential services. Students, staff, and faculty may struggle to report safety concerns, request assistance, or access emergency services effectively, leading to unaddressed issues and potential risks. This highlights the need for a centralized, user-friendly platform to ensure timely reporting, quick service access, and improved campus safety and well-being.

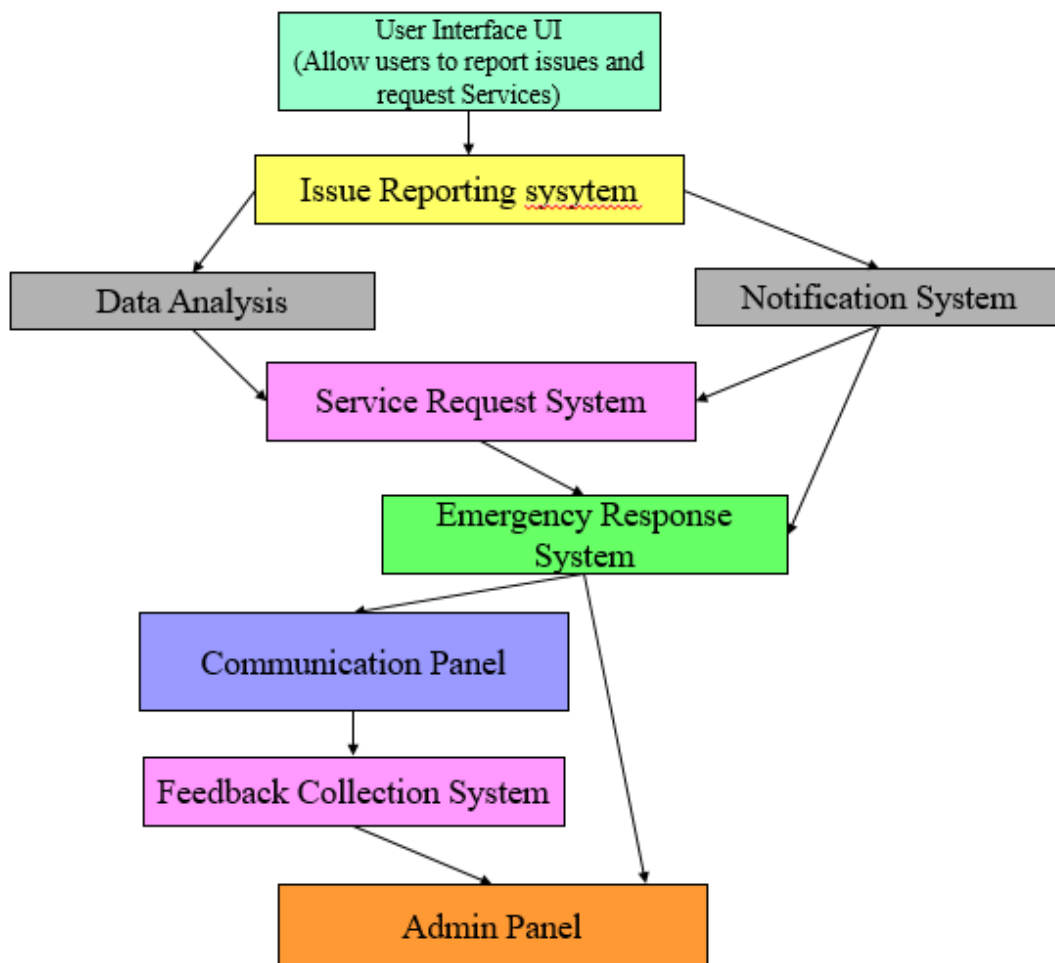
### **1.3 OBJECTIVE**

The objective of this application is to provide a centralized platform that enhances campus safety and accessibility to essential services. It aims to enable users to report safety concerns, maintenance issues, and request services such as counseling, medical assistance, or facility repairs in a quick and efficient manner. The app also ensures easy access to emergency contacts and institutional support resources, fostering a secure, supportive, and well-maintained campus environment through streamlined communication and timely assistance, user-friendly platform to ensure timely reporting, quick service access, and improved campus safety and well-being and Enhancing campus safety and services.

## CHAPTER 2

### PROJECT METHODOLOGY

#### 2.1 BLOCK DIAGRAM



## **CHAPTER 3**

### **KEY PHASES OF DESIGN THINKING**

#### **3.1 EMPATHIZE:**

Understand the users and their needs through primary research including user interviews and surveys, the team identified the key pain points.

- **Difficulty Reporting Issues Quickly**
- **Delayed Responses to requests**
- **Lack of Access to Emergency Support**

#### **3.2 DEFINE:**

Clearly define the problem statement based on insights gathered. The problem statement was refined to focus on:

- **Users lack a centralized platform for quickly reporting safety issues and accessing support services.**
- **Lack of a Centralized Platform**

Identify key goals and objectives for the app such as improving response time, simplifying issue reporting, and ensuring user safety.

#### **3.3 IDEATE:**

Brainstorm multiple solutions for the app's design and functionality. It generates innovative ideas to solve the define problem:

- **Centralized reporting system**
- **Emergency Response Integration**
- **User-Friendly Interface**

Exploring these solutions that would make the app intuitive and efficient.

### **3.4 PROTOTYPE:**

In this phase, we create simple models of the app to visualize its design and functionality.

- **Wire Frames for Reporting and Service Request.**
- **Emergency contact feature**
- **User Interface Design**

The prototypes will help visualize the app's key features, providing a foundation for testing and refinement.

### **3.5 TEST:**

We evaluate the prototypes by gathering user feedback to identify areas for improvement and ensure the app meets user needs effectively.

- **User Testing for usability**
- **Feedback on Emergency Features**
- **Performance Evaluation**

It helps identify potential issues and refine the app's functionality, ensuring that it is user-friendly, effective, and reliable before launch.

## CHAPTER 4

### MODULE DESCRIPTION

#### 4.1 USER AUTHENTICATION MODULE

The **User Authentication Module** ensures secure access by allowing users to register with their institutional email or ID, log in via email/password or SSO, and use multi-factor authentication for added security. It includes role-based access for students, staff, and admins, protecting user data and providing secure, personalized access to the app's features.

#### 4.2 PROFILE MANAGEMENT MODULE

The **Profile Management Module** allows users to manage their personal information and preferences within the app. Users can update their contact details, profile picture, and role-specific settings, such as emergency contacts or service preferences. The module also allows users to view their request history, track past issues or service requests, and manage notifications. Admins can update institutional details, monitor user activity, and manage roles. This module ensures that user information is kept up-to-date and provides a personalized experience within the app.

#### 4.3 SAFETY SERVICES MODULE

The **Safety Services Module** allows users to report security concerns, request emergency services, and access safety guidelines. It enables real-time submission of service requests, connects users to campus security or medical teams, and ensures quick responses for enhanced campus safety.

#### 4.4 UI/UX MODULE

The **UI/UX Module** ensures an intuitive, user-friendly interface with easy navigation, clear layouts, and seamless interaction. It is designed for smooth, efficient use by students, staff, and admins, enhancing the overall user experience.

## **CHAPTER 5**

### **CONCLUSION**

This application offers a comprehensive solution for enhancing campus safety and accessibility to essential services. By streamlining issue reporting, service requests, and emergency responses, the app ensures a secure, responsive, and well-supported environment for students, staff, and faculty. The app also facilitates real-time communication, quick access to emergency contacts, and personalized user experiences through role-based features. With its intuitive design, multi-layered security, and efficient functionality, it fosters a proactive approach to safety, enhances campus well-being, and promotes a safer, more connected campus experience for all users.

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2. **Designing Interfaces: Patterns for Effective Interaction Design** by Jenifer Tidwell - A book on UI/UX design principles for creating user-friendly interfaces. [Designing Interfaces \(O'Reilly\)](#)
3. **Human-Computer Interaction: An Empirical Research Perspective** by I. Scott MacKenzie - A book on HCI principles for UI/UX design. [Human-Computer Interaction](#)
4. **National Center for Campus Public Safety (NCCPS)** - Resources and best practices for improving campus safety. [www.nccpsafety.org](http://www.nccpsafety.org)
5. **UX Design Institute** - Offers UX design courses and resources for building effective user interfaces. [www.uxdesigninstitute.com](http://www.uxdesigninstitute.com)
6. **Zervant** - Provides resources on designing and implementing service request systems. [www.zervant.com](http://www.zervant.com)



## APPENDIX A – SCREENSHOTS

