Sector: ECE & EEE

STUDENT PROJECT SCHEME 2025-2026

Project Proposal On

CivicMind: AI-Driven Grievance Logger and Risk Prioritization System

Submitted to

TAMIL NADU STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

(Department of Higher Education, Government of Tamil Nadu)

Submitted by

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Under the Supervision of

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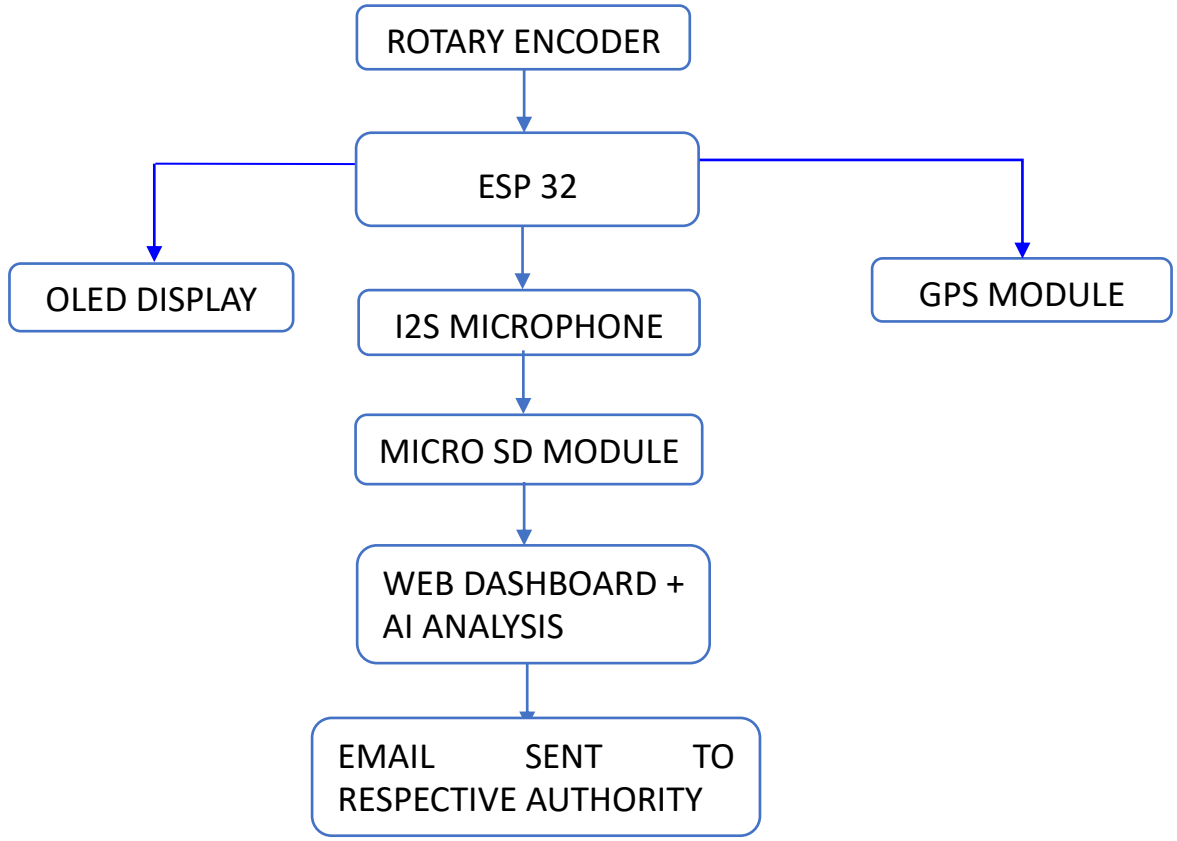
SRI RAMAKRISHNA INSTITUTE OF TECHNOLOGY

APPLICATION FORMAT FOR STUDENT PROJECT PROPOSAL

Please fill all the details in this MS word file. Convert to pdf file, get it approved from the project guide / head of the department and head of your institution. Keep ready the scanned pdf file of 1) Signed Application form 2) Declaration and Endorsement and fill-up the Google Form. Note: Handwritten proposals & multiple entries in Google form will not be accepted.

https://tinyurl.com/TNSCST-SPS-2025

1.	**Project Title: Civicmind: AI-Driven Grievance Logger and Risk Prioritization System**
2.	**Sector** (strictly choose only one): **ECE & EEE**
3.	**Name(s) of project guide(s):** 1. **Name: Dr. L. MALATHI** **Designation / Department: Assistant Professor (Selection Grade)/ Electronics and Communication Engineering** **Email id: malathi.ece@sritcbe.ac.in** **Contact No:9488263826**
4.	**Name of Team Members (Strictly not more than four students in a batch):** **Name: DHARSHINI R** **Year of Studying/Department/Course: IV/ECE/B.E** **Email id: dharshini.2204011@sritcbe.ac.in** **Mobile No:7708141941** **Name: KIRUTHIKA R** **Year of Studying/Department/Course: IV/ECE/B.E** **Email id: kiruthika.2204024@sritcbe.ac.in** **Mobile No:9342116467** **Name: MOUNIKA K** **Year of Studying/Department/Course: IV/ECE/B.E** **Email id: mounika.2204034@sritcbe.ac.in** **Mobile No: 7358893490**
5.	**Institution Details:** **Name of the Institution: Sri Ramakrishna Institute of Technology** **Institution category: Self Finance** **Address: Pachapalayam, Perur Chettipalayam, Coimbatore -641010** **District: Coimbatore** **Pincode:641010**

6.	**Introduction:** **CivicMind is a smart, AI-driven solution designed to make grievance reporting faster, easier, and more effective. It combines IoT hardware with machine learning to allow users to submit complaints simply by speaking. These voice inputs are automatically tagged with location data and analyzed to determine how urgent they are. At the heart of the system is the ESP32 microcontroller, which works alongside natural language processing (NLP) algorithms to understand and evaluate each complaint. By identifying and prioritizing critical issues, CivicMind helps authorities respond more quickly and manage public concerns more efficiently—ultimately improving the quality of civic services.**
7.	**Objectives of the project:** **This project aims to create a smart system that lets people register complaints using voice commands. It uses an ESP32 microcontroller to record and process voice inputs, and AI to check how urgent each complaint is. GPS helps tag the location of the issue, so authorities know where it happened. A simple interface with a rotary knob and small display makes it easy to use, and all data is saved on a memory card for offline access. A web dashboard will show and organize the complaints, helping officials respond quickly. The system is designed to work in cities, colleges, and other institutions, making complaint handling faster and more organized**
8.	**Methodology:** 

9.	**Workplan:** **We'll begin by researching existing solutions and selecting suitable components. After setting up the ESP32 microcontroller, we'll build the user interface using a rotary encoder and OLED display. Voice input will be captured via an I2S microphone and stored locally. Next, we'll integrate GPS for location tagging and connect the system to a cloud database. AI algorithms will analyze complaints and assign priority levels, while voice-to-text transcription will convert spoken inputs into readable text. A web dashboard will then be created for officials to monitor and respond. The final phase includes testing, debugging, and preparing documentation for deployment.**
10.	**Expected Outcome of the project:** **The final outcome will be a working prototype of CivicMind—a smart system that can log, sort, prioritize, and map public grievances in real time. By highlighting urgent complaints and organizing feedback clearly, it will help civic authorities respond faster and manage public issues more efficiently.**
11.	**Is the project proposed relevant to the Industry / Society?** **Yes / No: Yes** **If yes, please provide details of the industry details:** **CivicMind helps municipalities and institutions manage public complaints using AI and IoT. It's useful for smart cities and civic bodies. No formal support yet, but it's built for real-world use and open to future partnerships.** (**Note:** Preference will be given to projects relevant to the Industry / Society. Hence be specific in giving detailed information). Is the industry extending support - technology / funds / use the final product, please specify.
12.	**Can the product or process developed in the project be taken up for filing a Patent?** **Yes / No: Yes** **Prior Art search done?** **Yes/No: No** **Note:** If your answer is "Yes", you may contact Patent Information Centre of TNSCST. For more details, email: **ms.tanscst@nic.in**

13. **Budget details (The following is a tentative budget with break-up details; it is subject to change depending on the specific project requirements):**

Budget	Amount
a) Materials (ESP32/Nodemcu, OLED display, Arduino Uno, GPS module, rotary encoder, buzzer, SPDT switch, mic, RGB LED, Li-ion battery, TP4056, DC-DC step-up, 5V regulator, SD card module, memory card, card reader, power supply, 1s BMS, super capacitor, solar panel)	₹7,800
b) Consumables (Breadboard, push buttons, jumper cables, electrical components, soldering charges, battery holder)	₹1,330
c) Miscellaneous (USB cable, coding cable, MDF board, shipping)	₹870
Total	₹10,000

14. **Has a similar project been carried out in your college / elsewhere? If so furnish details of the previous project and highlight the novelty & improvements suggested in the present one:**

Yes.

Earlier projects mainly relied on software to handle complaints through text input and basic analysis. While helpful, they lacked the kind of real-world features that make a system truly usable—like hardware integration, voice input, and location tracking. That's where *CivicMind* brings a fresh approach. It uses ESP32, GPS, microphone, and OLED display to enable voice-based complaint logging, local data storage, and smart AI-driven prioritization based on urgency, location, and category. The system also sends automatic alerts to the concerned authorities and displays everything on a live dashboard, making it not just functional—but genuinely ready for real-world deployment.

15. **Any other details (Please specify):**

***CivicMind* is built to grow and improve over time. We plan to add a mobile app so people can easily report issues from their phones, making the system more user-friendly. We're also working on voice-to-text features in local languages, so everyone can use it comfortably, no matter what language they speak. In the future, the system will be able to spot patterns in complaints and even predict problems before they happen—helping officials fix things faster and smarter. These upgrades will**

	make *CivicMind* even more useful for both the public and local authorities.
16.	**SPS Coordinator (Identified by the college):** **Note:** To be identified by the Head of the Institution. The project proposals must be submitted to TNSCST through SPS coordinator designated. **Name: Ms.** **Designation/Department:** **Email id:** **Contact No.:**

Note: Any mismatch between the scanned PDF, the details filled in the Google Form, and the hard copy as well as multiple submissions via the Google Form will lead to **disqualification** of the proposal.

Name & Signature of the Project Guide	**Name & Signature of the HOD**	**Name & Signature of the Principal / Head of the Institution (with seal)**

DECLARATION

(From Project Students)

We, the project team hereby declare that the information provided in the enclosed project proposal **(Title of the Project:** CivicMind: AI Driven Grievance Logger and Risk Prioritization System, **Branch:** Electronics and Communication Engineering, **College:** Sri Ramakrishna institute of Technology, Pachapalayam, Perur Chettipalayam, Coimbatore-10**)** are true and correct to the best of our knowledge and belief. We understand that the Tamil Nadu State Council for Science and Technology (TNSCST) will not entertain any changes to the project title or the names of the team members under any circumstances.

We further declare that the proposed project work is original, not copied or purchased from any source. We are committed to carrying out the project independently, with appropriate guidance from our faculty and project guide, and by utilizing the facilities provided by our institution. We pledge to maintain academic integrity, avoid plagiarism, and work sincerely and diligently to execute and complete the project as proposed.

We understand that any false, incorrect, or misleading information provided in this proposal may lead to disqualification or other consequences as deemed appropriate. We also authorize the sharing of the project details contained in this proposal with TNSCST, Chennai.

We acknowledge that, if selected, our team is required to exhibit and present the project at the **Annual State-Level Seminar-cum-Exhibition** organized by TNSCST.

The endorsement form for TNSCST, Chennai is enclosed herewith.

Name of the students with Register No. **Signature with date**

1. Dharshini R (71382204011)
2. Kiruthika R (71382204024)
3. Mounika K (71382204034)

Name & Signature of project Guide **Name & Signature of HOD (with Seal)**

ENDORSEMENT

(From College, endorsement to be taken in the Institution / Department Letter head)

This is to certify that the following students:

1. Ms. Dharshini R (71382204011),
2. Ms. Kiruthika R (71382204024),
3. Ms. Mounika K (71382204034),

are bonafide final year students of the Department of Electronics and Communication and Engineering, enrolled in the _____ degree program at our institution and it is certified that 2 copies of Utilization Certificate (UC) and final report along with seminar paper will be sent to the Council after completion of the project within specified timeline.

We hereby confirm that, if the project proposal submitted by the above-mentioned students under the **Student Project Scheme** is selected by **TNSCST**, our institution will extend full support by providing the necessary laboratory, computer, and infrastructure facilities required for the successful execution of the project.

Furthermore, we assure that appropriate measures will be taken to ensure the project team participates in the **Annual State-Level Seminar-cum-Exhibition** (if selected) and exhibits/demonstrates their project.

If the student team or project guide fails to submit the completed project report and the Utilisation Certificate within the timeline specified by TNSCST (if selected), our institution will ensure that the sanctioned project amount is returned to TNSCST.

Name & Signature of Project Guide	**Name & Signature of HOD (with Seal)**	**Name & Signature of the Principal / Head of the Institution (with Seal)**