KSCST

ಕರ್ನಾಟಕ ಸರ್ಕಾರ

KARNATAKA STATE COUNCIL FOR SCIENCE AND TECHNOLOGY

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FORMAT FOR STUDENT PROJECT PROPOSAL FOR THE 48th SERIES OF STUDENT PROJECT PROGRAMME

(Handwritten proposals will not be accepted, please fill all the details in this MS word file, insert images / diagrams wherever necessary. Convert to pdf file, get it approved from the project guide / head of the department and principal of your institution. Keep ready the scanned pdf file of 1) Declaration and Endorsement 2) details of processing fees made and fill-up the Google Form.

https://forms.gle/ks2WxWB4ei1hgv9D9

1.	**Name of the College:** **ALVAS INSTITUTE OF ENIGINEERING AND TECHNOLOGY**
2.	**Project Title:** **SMART FLOOR CLEANING SYSTEM**
3.	**Branch:** **ELECTRONICS AND COMMUNICATION**
4.	**Theme (as per KSCST poster):** **Rural Engineering and Technical support, Smart cities and Infrastructure Development.**
5.	**Name(s) of project guide(s):** **Name: Mr. SUDHAKARA H.M** **Email id: sudhi123@aiet.org.in** **Contact No.: 9611385725**
6.	**Name of Team Members (Strictly not more than four students in a batch):** *(Type names in Capital Letters as provided in your college)* (Please paste the latest passport size photograph adjacent to your respective names) **Name: SHIVAKUMAR K.V** **USN No.: 4AL21EC079** **Email id: 4al21ec079shiva@gmail.com** **Mobile No: 9019752561** 

	Name: SHASHANK VIRESH SHETTI **USN No.: 4AL21EC078** **Email id: 4al21ec078@gmail.com** **Mobile No.: 8867650239**  **Name: PRASANNA KUMAR B.I** **USN No.: 4AL21EC064** **Email id: 4al21ec064@gmail.com** **Mobile No.: 8088668035**  **Name: SHASHANK SWAMI** **USN No.: 4AL21EC077** **Email id: 4al21ec077@gmail.com** **Mobile No.: 7975468909** 
7.	**Team Leader of the Project:** **Name: SHIVAKUMAR K.V** **USN No.: 4AL21EC079** **Email id: 4al21ec079@gmail.com** **Mobile No.: 9019752561**
8.	**Processing Fee Details (Through Online Payment only):** **(processing fee of Rs. 1180/-)** **Please furnish the payment details in the format provided in the last page of the proposal.**
9.	**Date of commencement of the Project:** **16-9-2024**
10.	**Probable date of completion of the project:** **30-12-2024**
11.	**Scope / Objectives of the project:** The goal of the smart floor cleaner project is to create an effective electromechanical cleaning robot that can do mopping and sweeping duties. By robotics technology, the robot which can be operated in both manual and automatic modes, seeks to make floor cleaning easier. The project aims to automate the cleaning process, minimize manual labour and guarantee reliable and superior cleaning outcomes in a variety of settings including households, businesses, and healthcare facilities by integrating elements such microcontrollers,sensors, and cleaning mechanisms.

12.	**Methodology:** The design and implementation of the smart floor cleaning system project are done in a systematic manner the robots functional foundation is first created by assembling the hardware parts, which include the Arduino UNO microcontroller, motor driver L298N, Bluetooth module HC-05, servo motors, and water pump. Efficient movement is made possible by the integration of sensors for obstacle identification and navigation.Both manual operation using a keypad or Bluetooth app and automatic mode for self-cleaning are supported by the control system. To guarantee complete cleaning, sweeping and mopping mechanisms are integrated, driven by motors and a water pump. A 12V battery powers the system, and every part is adjusted for best performance. Lastly, a lot of testing is done to improve the robot's performance and make sure it achieves the goals. **Note:** In case of fabrication work in the project, an engineering drawing with dimensions / detailed design should be attached to the proposal.
13.	**Expected Outcome of the project:** The smart floor cleaner project will result in a working cleaning robot that can efficiently complete sweeping and mopping duties in both manual and automated modes. To guarantee effective and reliable cleaning across a range of floor kinds, the robot will include parts like motors, sensors, and microcontrollers in addition to user-friendly controls like smartphone app with Bluetooth. The prototype, which aims to save time and lessen human labour, will show how robotics and electronics can be used practically in daily life by providing a scalable and affordable way to maintain cleanliness in commercial, industrial, and residential settings.

14. **Is the project proposed relevant to the Industry / Society or Institution?**

Yes / No:

Yes

If yes, please provide details of the industry / institution and contact details:

Our project is used in the houses , apartment , hotels etc.

(**Note:** Preference will be given to those projects relevant to the industry / institution. Hence be specific in giving detailed information). Is the industry extending support - technology / funds / use the final product, please specify.

15. **Can the product or process developed in the project be taken up for filing a Patent?**

Yes / No:

NO

Prior Art search done?

Yes/No:

NO

Note: If your answer is "Yes", you may contact Patent Information Centre of KSCST. For more details, email: pic@kscst.org.in

16. **Budget details (break-up details should be given):**

Note: KSCST will provide nominal grant support for carrying out the project by students if selected by the project selection committee.

Budget	Amount
a) Materials / Consumables (Please specify)	7420
b) Labor (Describe)	4560
c) Travel (Describe)	1340
e) Miscellaneous (Please specify)	2380
Total	15700

17. **Any other technical details (Please specify):**

This project is based on Iot(Internet of things)

18.	**SPP Coordinator (Identified by the college):** **Note:** To be identified by the principal of the institution. The project proposals must be submitted to KSCST through SPP coordinator designated by the principal. **Name: Dr. Pradeep V** **Email id: office.ise.@aiet.org.in** **Contact No.: 7406057060**

Name of the Project Guide:Mr.Sudhakar H.M
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