

# DEERAJ P MENON

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B.Tech in Electronics and Communication Engineering, CUSAT (2024–2028).

## Skills

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- **Embedded Systems:** Proficient with ESP32, Arduino (Uno/Nano), sensor interfacing, and IoT-focused firmware design.
- **Programming:** C, C++, Java, HTML, CSS, JavaScript, Arduino IDE, PlatformIO, ESP-IDF, MIT App Inventor.
- **Tools:** FreeCAD and Onshape for basic 3D modeling, Tinkercad, Canva for design, version control (Git).
- **Soft Skills:** Leadership, public speaking, teamwork, technical teaching, and presentation.

## Positions of Responsibility

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### Vice Chair, IEEE APS CUSAT SBC

*2025–Present*

- Manage and promote technical initiatives, workshops, and collaborative projects involving antennas and propagation research.
- Facilitate member engagement through regular seminars, hands-on sessions, and industry-focused events.

## Internships

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### Embedded Systems & Product Development, Behemoth Team (SAE India)

*Jan 2025*

- Helped in development of an ESP32-based automatic vegetable transplanter for SAE India's TIFAN competition.
- Implementing sensor/actuator modules (depth/spacing control) and a web-based interface for real-time status monitoring with SMS rate feature.
- Coordinating with mechanical teams for synchronized prototyping and thorough testing to ensure reliability.

## Projects

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- **RescueBot – Rescue Robot (1<sup>st</sup> Prize)** ( [GitHub](#)):  
ESP32-based robot featuring a web interface hosted on ESP32 webserver, obstacle detection, MQ2 gas alert, PIR sensor for human detection, and emergency touch sensor.
- **Signal Hunt** ( [GitHub](#)):  
An ESP32-based treasure hunt system with a radar-style interface, designed to teach signal propagation basics through an interactive game.
- **SmartPaw – Pet Services Platform** ([smartpaw.in](http://smartpaw.in)):  
Connects pet owners with services like grooming, boarding, and real-time pet monitoring through a responsive web solution.
- **StatusWindow** ( [GitHub](#) | [Website](#)):  
Manga-style user interface for tracking personal goals, achievements, and daily quests, featuring analytics and stat progress.

## Achievements

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- **1<sup>st</sup> Prize, Microprocessor Hackathon** (RescueBot, Hertz Event 2025 by ECSA, CUSAT).
- **2<sup>nd</sup> Prize, Amazon-Sponsored Pan-India Hackathon** (during 12<sup>th</sup> Grade).