# MADHAVAN T

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Electronics and communication engineering student with a strong interest in embedded systems. Skilled in C programming and communication interfaces like SPI, $I^2C$, UART, and CAN. Currently working on projects using the LPC microcontroller. Curious and hands-on learner, looking for an opportunity to apply my skills in embedded or IoT development projects.

## EDUCATIONAL BACKGROUND

Class 10 (2019)
Jayarrajesh Matric Hr Sec School,
Percentage: 78%

Class 12 (2021)
Jayarrajesh Matric Hr Sec School,
Percentage: 84%

B.E. ECE  (2021-2025)
Kumaraguru College of Technology,
CGPA: 7.46/10

## TECHNICAL SKILLS

**Programming Language**
- Embedded  c
- C

**Hardware Skills**
- PCB Design and Develpment
- IOT Hardware Integration
- R&D

**Tools**
- Keil uVision
- HFSS
- Altium
- Arduino IDE

## PROJECTS

**Next-Gen Voting System using RFID and EEPROM**

Designed and developed a microcontroller-based electronic voting system using RFID authentication for voter identification. Data transmission between modules was handled via the UART protocol, while vote records were securely stored in EEPROM using the $I^2C$ interface.

**Obstacle-Removing Robotic Arm for Space Rovers**

A robotic arm was built and programmed using Arduino to sense and remove obstacles in real time. This helps the rover move more freely and complete its missions more effectively.

**Development and Optimization of a High-Performance Electric Go-Kart Vehicle**

An electric go-kart was designed using a BLDC motor, battery pack, and regenerative braking for better performance and efficiency. The optimized chassis and testing helped achieve higher speed, smoother handling, and improved safety.

**Design and Analysis of Reconfigurable CSRR-BasedMetamaterial for Multiband Antenna Applications**

A compact CSRR-based metamaterial antenna was designed and simulated to support multiple frequency bands with better efficiency. It offers reconfigurability, reduced size, and improved performance for 5G, IoT, and satellite communication.

## COURSE

Embedded System Develpoment

## ACHIEVEMENTS
- Represented college at the 9th and 10th Electric Go-Kart Design Challenges (GKDC) organized by ISNEE Motorsports.
- Skill Development and Entrepreneurship training Program -Nano Satellite and IOT Sensors
- 7th FKDC and 1st FKRC  Go Kart design  challenge-IC category.

## ROLES AND RESPONSIBILITES
- Team Member in E-Zeall Racing (KCT Garage2021)
- Team Captain in E-Zeall Racing (KCT Garage2022)
- Event Organizer in National Electric Bike Challenge(NEBC)