

Karthik G

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Summary Enthusiastic individual with a strong foundation in **Electronics and Communication**, coupled with hands-on experience in **MERN stack development**. As an **NCC cadet**, I have developed leadership skills, discipline, and teamwork abilities. Eager to leverage technical skills in a challenging role to contribute effectively to innovative projects.

Skills	Electronics & PCB Design	Microcontrollers
	Analog/digital circuits, testing, PCB design with KiCAD	Programming 8051, DSPIC33CH, ESP32, RP2040 with C/C++ and Micropython
	Embedded Systems	IoT Development
	UART, ADC, PWM	Blynk, ThinkSpeak, sensors, HTTP
	Programming	MERN Stack
	C, C++, JavaScript	MongoDB, Express.js, React, Node.js

Experience	ECSite Solutions India Ltd	June - July 2024
	Intern Website - Link	Chennai
	Detail-oriented intern with hands-on experience in MERN stack development . Developed and launched two live features for the web portal, enhancing user experience. Proficient in MongoDB, Express.js, React, and Node.js, eager to contribute to innovative projects.	
	NLC India Limited	June - July 2023
	Intern Website - Link	Neyveli
	Proactive intern with hands-on experience in Telephone Exchange Systems , focusing on installation, maintenance, and troubleshooting. Assisted in optimizing network performance and improving call quality. Eager to apply technical skills in telecommunications projects.	

Education	Annamalai University	2021 - 2025
	Electronics and Communication Engineering (ECE)	UG
	OGPA - 9.57	
	Zamindar's Higher secondary school	2020 - 2021
	Percentage - 89 %	HSC
	Government Higher secondary school	2018 - 2019
	Percentage - 87 %	SSLC

Projects	Real-Time Forest Fire Detection System using IoT & AI			
	<ul style="list-style-type: none"> Built a real-time fire detection system using ESP32-CAM with YOLOv11 (Flask) for live video analysis. Integrated ESP32-WROOM, DHT11, GPS, and SIM7672S for sensor data collection and SMS alerts. Developed a MERN stack dashboard for real-time map and sensor data visualization using <u>Socket.IO</u>. Achieved high-accuracy fire detection with <1 sec response time. 			
	RFID-Based Employee Attendance System for Dubai Restaurant <ul style="list-style-type: none"> Designed an RFID-based Employee Attendance System using ESP8266, RFID module, 16x2 LCD, and buzzer. Automated employee check-ins by sending real-time attendance data to a server. Improved efficiency and accuracy by eliminating manual attendance tracking. 			
Volunteering	National Cadet Corps - Navy		2021 - 2024	
	Rank - Leading Cadet (LC)			
	ECE Association		2023 - 2024	
	Class Representative			
	ECE Association		2022 - 2023	
	Secretary			
Certifications	NPTEL - Swayam		Innovative Engineering and Technology	
	Indian Institute of Technology , Kharagpur		PPG Institute of Technology , Coimbatore	
	Cloud Computing		Paper Presentation - Wireless Charging of Mobile Phones by using Microwave	
	Percentage - 63%			
	Jun - Oct 2023		Oct 2023	