

# Karthik E.M

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🌐 <https://github.com/Karthik-EM> | 🔗 <https://linkedin.com/in/karthik-e-m-33449a292>

## Skills

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**Languages:** C/C++, Python, HTML, CSS, JavaScript, SQL

**Frameworks:** Flask

**Tools:** Git, GitHub, VS Code, Google Colab, VirtualBox

**Operating Systems:** Windows, Linux (basic usage & CLI)

**Embedded Systems:** Microcontrollers (Arduino, ESP32), IoT Development, Sensor Integration

## Education

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**Adi Shankara Institute of Engineering and Technology, Kalady**

2022 – 2026

BTech in Computer Science and Engineering

**CGPA: 8.01/10**

Relevant Coursework: Object Oriented Programming, Databases, Discrete Maths, Data Structures and Algorithms, Operating Systems, Computer Networks, Web Programming

**Brahmanandodayam, Kalady**

2020 – 2022

Higher Secondary Education (Computer Science) – State Board

**Percentage: 95.66%**

## Academic Projects

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- **Blind Navigation using Vision-Language Models (2025):** Built an assistive tool for the visually impaired by combining object detection (DETR), monocular depth estimation (UniDepthV2), and a vision-language model (Qwen-VL) to generate spatially-aware scene descriptions. Developed an accessible web app with TTS and chat support.  
**Tech Stack:** Python, PyTorch, Flask, OpenCV, Qwen-VL, HTML/CSS  
**GitHub:** <https://github.com/TEAM-5-PROJECTS/Vision-assistant>

## Personal Projects

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- **Interactive BIOS-Themed Portfolio Website (2025):** Designed and developed a personal portfolio themed after a retro BIOS setup screen using only HTML, JavaScript and CSS. Implemented section hover animations, SVG icons, and audio effects for an immersive UI/UX experience.  
**Tech Stack:** HTML, CSS, JavaScript  
**GitHub:** <https://karthik-em.github.io/WEBSITE/>

## Certificates

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- **NPTEL – Programming in C (2025):** Completed an online certification course on C programming fundamentals, problem-solving, and data structures.  
**Issued by:** NPTEL / IIT (Government of India)

## Languages

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- **English:** Good command (speaking and writing)
- **Hindi:** Basic Understanding
- **Malayalam:** Native proficiency