Parthivsurya K B

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About Me

Passionate Computer Science student and builder focused on turning ideas into functional systems. Experienced in backend development, REST APIs, and IoT integration. Proficient in Data Structures and Algorithms with a proven track record of winning hackathons and developing end-to-end products.

Education

Amrita Vishwa Vidyapeetham   Coimbatore, India
Bachelor of Technology in Computer Science & Engineering   Expected 2028

Hackathons & Competitions

- **1st Place / Winner** – STEM Hackathon (ACM)   2025
- **3rd Position** – Winter of Code (WoC 3.0)   2025

Technical Skills

- **Languages:** C, Java, Python, JavaScript, TypeScript, SQL, Cypher (Neo4j)
- **Frameworks/Libraries:** Flask, React, Node.js, Vite, Three.js, React Three Fiber
- **Databases:** MySQL, MongoDB, Neo4j (Graph Modeling), Supabase
- **Tools & Technologies:** Git, Linux, Vercel, ESP32-CAM, IoT Integration, REST APIs, YOLO

Selected Projects

brAIn – AI-Powered STEM Education Platform (ACM Hackathon Winner)   *React, Three.js, Gemini API*
- Developed a 1st-place winning EdTech platform using **React Three Fiber** for immersive 3D simulations.
- Integrated **Google Gemini API** to create "Prof Owl," an AI-powered personalized tutor.
- Built a robust gamification system and secure authentication using **Supabase** backend.

Smart Crowd Management System   *Python, Flask, MongoDB, YOLO, ESP32*
- Engineered an IoT system for real-time crowd density detection and remote monitoring using **YOLOv8**.
- Designed scalable **Flask REST APIs** and a **MongoDB** schema to store and process high-frequency camera logs.
- Optimized hardware-software pipelines for live dashboard visualization and fast data access.

HTTP-Based Communication System   *C, Networking*
- Collaborated in a 4-member team to build a system utilizing **HTTP protocols** for command transmission.
- Enabled seamless client-to-server command execution and output retrieval.

Treely – Web3 Tree Donation Platform   *HTML, CSS, JavaScript*
- Developed a Web3-enabled platform for $1 tree donations with a dynamic UI and JSON-based management.

Key Interests & Focus Areas

- **Data Structures & Algorithms:** Strong foundation in optimized problem solving using Java and Python.
- **Product Development:** Passionate about turning prototypes into scalable, real-world systems.
- **Hardware-Software Integration:** Experience building systems that bridge physical sensors and cloud backends.