Ayush Daga

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Personal Profile

Diligent and motivated Computer Science undergraduate student with a strong foundation in programming and problem solving. Demonstrates excellent communication skills and a keen eye for detail, ensuring high-quality work in both team and individual settings. Adept at applying theoretical knowledge to practical scenarios.

Education

B. Tech in Computer Science Engineering, International Institute of Technology, Hyderabad | July 2024 - Present
CGPA: 9.28

Projects

1. **Smart Irrigation using IoT** 🔗
   - Designed and implemented a smart irrigation system using ESP32 microcontrollers, LoRa communication, and sensor data (moisture, temperature, humidity) for automated, efficient water usage.
   - Developed a modular 3-tier architecture with field devices, a local hub, and a web interface, enabling real-time monitoring, AI-driven control, and remote manual override via HTTP APIs.
   - Optimized power efficiency on the field ESP32 using deep sleep and sensor calibration, achieving long-term autonomous operation with minimal battery drain.
   - Integrated UART communication between LoRa and Wi-Fi ESP32s to handle long-range sensor data transmission and cloud-based analytics through Node.js and Flask backend.

2. **Built a Personal Website** 🔗
   - Designed and developed a responsive personal portfolio website using HTML, CSS, and JavaScript to showcase education, skills, and projects.
   - Implemented interactive components like animated flip cards, skill grids, and a floating text analyzer using DOM manipulation and event handling.
   - Structured the website across multiple pages (About, Education, Skills) with a consistent navigation system and mobile-friendly layout.
   - Integrated analytics functionality to track user interactions (clicks and views) and added a floating modal for real-time text analysis.

Skills and Interests

- **Languages**: C++, C, Python, Java, HTML, CSS, JavaScript, SQL (MySQL), NoSQL (MongoDB), Assembly (x86-64 AT&T).
- **Courses completed:** Computer Programming, Data Structures and Algorithms, Computer Systems Organisation, Intro to Software Systems, Intro to IoT, Digital Systems and Microcontrollers.
- **Skills:** Data Structures and Algorithms, Problem Solving, Debugging.
- **Interests:** Data Science, Big Data, Computer Vision