Charan Kumar Bommakanti

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Profile

Aspiring Frontend Developer and Embedded Systems Engineer skilled in HTML, CSS, JavaScript, Bootstrap,React and Arduino. Passionate about creating efficient, innovative solutions in a dynamic tech environment.

Skills

Frontend Development:
- HTML, CSS, JavaScript, React
- Bootstrap, Responsive Design

Embedded Systems & IoT:
- Arduino, Microcontrollers
- Sensor Integration, Basic Electronics

Programming Languages:
- JavaScript
- Python (Basics)

Tools & Version Control:
- Git, GitHub
- VS Code, PLX-DAQ

Education

B. Tech in Electronics and Communication Engineering   05/2025
NNRG College | CGPA: 7.4 | 2025

Diploma in Electronics and Communication Engineering   05/2022
SSIT College | CGPA: 7.0 | 2022

Projects

Restio (Hotel Booking Website) ⬈
Technologies: HTML, CSS, JavaScript, Bootstrap
- Constructed a real-time filtering system enabling users to refine hotel searches by price and rating, which improved user satisfaction scores by 20% according to post-booking surveys.
- Integrated real-time search functionality allowing users to filter hotels by location, dates, and guest count with dynamic results.
- Developed an interactive reservation system enabling users to select rooms, check availability, and book stays with instant confirmation.
- Enhanced user experience with smooth animations, form validation, and a mobile-friendly UI for effortless navigation and bookings.

Tata Motors Website ⬈
Technologies: HTML, CSS, Bootstrap, JavaScript
- Developed a responsive car listing website using HTML, CSS, and Bootstrap for seamless browsing.
- Implemented an interactive auto-carousel to showcase featured vehicles with smooth transitions and controls.
- Created a dedicated EV section with filters to highlight electric vehicle options clearly.

- Enhanced user experience with JavaScript-driven dynamic content and mobile-friendly navigation features.

Matrix LED Headlight System
Technologies: Arduino, LDR Sensors, Ultrasonic Sensors, Embedded C
- Architected an adaptive LED headlight system using Arduino to enhance nighttime driving safety and visibility.
- Merged LDR sensors to automatically adjust headlight brightness based on ambient light conditions for optimal illumination.
- Utilized ultrasonic sensors to detect oncoming vehicles and dynamically dim the headlights to prevent glare for other drivers.
- Improved Embedded C for real-time sensor processing and LED headlight control. Designed a compact, modular prototype for easy scalability and upgrades.

Bluetooth-Controlled Robot
Technologies: Arduino, HC-05 Bluetooth Module, Motor Drivers, Embedded C
- Expanded a Bluetooth-controlled robot using Arduino and HC-05 module for wireless smartphone communication efficiently.
- Incorporated motor drivers to manage movement and operation via embedded C programming effectively.
- Enabled remote control functionality through custom Bluetooth commands for seamless robot navigation smoothly.
- Designed and implemented a responsive system for real-time wireless control and maneuverability reliably.

Certifications & Achievements

- 2nd Position in Technical Events – Tech Samparthi 2024, NNRG College Recognized for outstanding performance in coding and technical competitions.
- National-Level Generative AI Hackathon – IIIC & IIC, NNRG College Successfully developed and presented innovative AI-based solutions in a competitive hackathon.
- Web Development Certification – Udemy Completed 30+ hours of hands-on training in HTML, CSS, JavaScript, React.js, and modern front-end frameworks.

Positions & Responsibilities

- Fire-Fighting Robot Project Lead Directed hardware-software integration and real-time control systems for autonomous fire detection and suppression.
- Joint Secretary - IETE Student Forum (2023-2024) Organized technical workshops and student engagement initiatives to promote STEM learning.

Interests & Hobbies

Passionate about web development, IoT/embedded systems, and emerging technologies, with hands-on experience in competitive hackathons and technical projects.