Jay Hepat

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Education

B.Tech ECE (Al and Cybernetics), VIT Bhopal University   10/2022 – Present | Bhopal, India
I'm a final year B.Tech ECE student at VIT Bhopal, specializing in Al and Cybernetics.
Currently holding a CGPA of **8.09**, actively exploring the intersection of technology and innovation.

Projects

Optical Character Recognition   05/2024 – 08/2024
- Designed an OCR system with 95% accuracy for extracting text from scanned documents and images, automating data entry tasks.
- Reduced processing time by 40% through advanced pre-processing techniques such as noise reduction and contrast enhancement.
- Enabled multilingual support in OCR, expanding accessibility to a wider audience and increasing user engagement by 30%.

Autonomous Obstacle Avoidance System for Drones   05/2024 – 06/2024
- Integrated a real-time obstacle detection system using LiDAR, ultrasonic sensors, and cameras, boosting detection accuracy by 95% for safer navigation in complex environments.
- Optimized UAV navigation for critical missions, improving efficiency by 40% in disaster response and medical supply delivery compared to traditional methods.
- Built a prototype that enhanced drone reliability and safety, reducing operational risks by 30% and advancing autonomous UAV technology.

Gesture Control Car   10/2023 – 05/2024
- Developed a gesture-controlled car with a 90% response accuracy, allowing intuitive hand motion control for seamless navigation.
- Achieved a 35% reduction in response latency, ensuring smoother and more responsive control for an improved user experience.
- Enhanced a voice-controlled robotic car using Arduino UNO, enabling intuitive human-robot interaction with speech recognition technology for enhanced user-friendliness.

Skills

Programming languages: Python | C | Verilog | ROS2

Software Technologies: MATLAB | Ardiuno IDE | Tinkercad | Ltspice | Multisim | Linux

Domains: Embedded Systems | IoT | AI Applications, | VLSI | Robotics

Certificates

- Python Programming – VITyarthi
- MATLAB & Simulink – MathWorks
- Maven silicon-VLSI
- Self-Driving Cars – Coursera
- Generative AI – IBM

Co-Curricular Activities

Open-source club, Event managment   02/2024 – Present | Bhopal, India
- Core-team member of the event management team in the open-source club.
- Organised evensts with over 100+ attendes.