Soujanya S P

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Education

JSS Academy of Technical Education, Bangalore *Aug 2022 – Present*
Bachelor of Engineering in Electronics and Instrumentation Engineering *CGPA: 6.21*

Dayanada sagar PU College *2020 – 2022*
Karnataka State Board – PCMC *Percentage: 76.37%*

JSS high school jayanagar 7th block,bangalore *2015 – 2020*
High School – 10th Grade *Percentage: 83.36%*

Projects

Hybrid UGV-UAV for Military Reconnaissance (Planning) *Ongoing*
Final Year Project (Team Lead)

- Designing a 3D-printed manually-controlled Unmanned Ground-Air Vehicle using Raspberry Pi 3B+ for military applications.
- Developing Python-based control and mission planner software with object tracking, terrain navigation, and real-time streaming.

Biometric Attendance System *Jan 2024 – Mar 2024*
Raspberry Pi, Python, OpenCV, Fingerprint Sensor

- Developed fingerprint-based student attendance system with GUI and CSV logging.
- Used OpenCV for facial verification and PyFingerprint for biometric sensor integration.

Maze Solver Using AI Algorithms *Sep 2023 – Oct 2023*
Python, Pygame

- Implemented BFS and DFS algorithms for solving random 2D mazes.
- Visualized search path and nodes explored in real-time using Pygame.

Object Detection using Edge Impulse and Arduino Nano 33 BLE Sense *May 2023 – Jun 2023*
Edge Impulse, Embedded C++

- Trained a CNN model for gesture recognition using accelerometer and microphone data.
- Deployed on-board Arduino Nano 33 BLE Sense for real-time object detection.

Technical Skills

- **Languages:** Python, C, ARM Assembly, Embedded C, MATLAB
- **Tools/Frameworks:** Streamlit, OpenCV, NumPy, Pandas, Edge Impulse, TinkerCAD, Git
- **Hardware Platforms:** Raspberry Pi, Arduino, ARM Cortex-M, Sensors, Motors, ADC/DAC
- **Domains:** Data Science, AI/ML, IoT, Robotics, Embedded Systems