

B Meghana

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Objective

Junior Backend Developer with hands-on experience in Python, Flask, and MySQL, focused on building scalable backend systems and RESTful APIs. Comfortable working across the full software development life cycle and collaborating in fast-paced, cross-functional teams.

Skills

Python, Flask, SQLAlchemy, PostgreSQL, MySQL, SQLite, Pytest, HTML5, CSS3, Bootstrap, C (Basic), C++ (Basic/Embedded) NumPy, Pandas, Matplotlib, Seaborn, yaml, git, github

Projects

CRUD Web Application

Academic Project | Backend Development

- Developed a Flask-based backend implementing CRUD operations using REST-style routes.
- Handled request-response cycles and server-side data processing.
- Built basic frontend using HTML, CSS, and Bootstrap for interaction testing.

Technologies: Python, Flask, HTML, CSS

GitHub: github.com/lily047/flask_development

Dry Plastic Waste Detection & Segregation System

Embedded Systems

- Developed a **sensor-based prototype** to detect and segregate dry plastic waste using **IR sensor readings** and threshold-based classification.
- Calibrated IR sensor values through experimentation and defined a baseline to distinguish **plastic vs non-plastic** materials.
- Implemented **embedded C++ logic on Arduino Uno** to process sensor input, control a **servo motor**, and display real-time system status via the serial console.
- Integrated a proximity-based sensor to monitor **dustbin fill levels** and detect overflow conditions.
- Demonstrated skills in **testing, validation, and hardware-software integration** under constrained embedded environments.

Technologies: Arduino Uno, IR Sensor, Proximity/UV Sensor, Servo Motor, C++ (Embedded)

GitHub: github.com/lily047/dry-plastic_waste_detection

Education

BS in Data Science and Applications - 2028

Indian Institute of Technology Madras

BS in Computer Science - 2028

Delhi University