Aditya Varshney

adityavarshney808@gmail.com | https://www.linkedin.com/in/adityaavarshney/ | https://github.com/adityavar808/

Education

Krishna International School — Aligarh, U.P.
High School — *April 2020 – April 2021*

Radiant Stars English School — Aligarh,U.P.
Intermediate — *April 2022 – April 2023*

GLA University — Mathura, U.P.
Bachelor of Technology — *Aug. 2023 – May 2027*

Projects

House Price Prediction | *Python, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn* — Jan 2025 – Feb 2025

- Developed a predictive model to forecast house prices based on historical data of housing features such as location, square footage, number of bedrooms, and more.
- Preprocessed the data using Pandas, handled missing values, outliers, and scaled the features.
- Implemented regression models like Linear Regression, Random Forest, and XGBoost for prediction.
- Evaluated model performance using metrics such as Mean Absolute Error (MAE) and Root Mean Squared Error (RMSE).
- Visualized the data and model predictions using Matplotlib and Seaborn to understand patterns and results.

Water Flow Monitoring System | *ThingWorx, IoT, MQTT, Arduino* — Nov 2024 – Dec 2024

- Developed a water flow monitoring system using IoT sensors, which continuously monitor water flow in pipelines.
- Integrated ThingWorx with the IoT sensors for real-time data visualization and analysis.
- Set up MQTT protocols for data communication between sensors and ThingWorx platform.
- Monitored the flow rate and alerted users if the flow exceeded set thresholds for safety purposes.

Patient Monitoring System | *ThingWorx, IoT, Node-RED* — Feb 2025 – Mar 2025

- Built an IoT-based Patient Monitoring System that tracks various health parameters in real time, such as heart rate and blood pressure.
- Used ThingWorx for data collection and analytics, while Node-RED managed the IoT data flows.
- Displayed the real-time health status on a dashboard and sent alerts in case of abnormal readings.

Real-time Video Analysis | *Python, OpenCV, TensorFlow, Keras* — Aug 2024 – Oct 2024

- Created a real-time video analysis application that processes live video streams to detect objects, recognize faces, and track movements.
- Utilized pre-trained deep learning models (YOLO and MobileNet) for object detection and face recognition.
- Implemented video capture and processing using OpenCV, with the results displayed in real time on a GUI.
- Optimized the model using TensorFlow and Keras for faster prediction, ensuring minimal latency in live video processing.

Technical Skills

Languages: Java, Python, SQL, JavaScript, HTML/CSS
Frameworks: Flask, Tkinter
Developer Tools: Git, VS Code, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: Pandas, NumPy, Matplotlib, Seaborn, Scikit-Learn, Joblib
OOPS Concepts: Object-Oriented Programming in Python
IoT Platforms & Tools: ThingWorx, Arduino, Raspberry Pi, MQTT, Node-RED, Sensors & Actuators Integration

Certifications

Artificial Intelligence and Machine Learning Certification — Pregrad Pvt. Ltd.
Certificate in AI and Machine Learning — *Feb 2025*