Jai Vadula

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Education

Vellore Institute of Technology, Bhopal, India
Integrated M.Tech in Computer Science and Engineering
Major: Computer Science — Minor: Artificial Intelligence CGPA: 8.62/10 *August 2021–May 2026*

Amity International School, Gurgaon, India
Senior Secondary Education: Physics, Chemistry, Maths; Percentage: 86.0 *April 2019–May 2021*

OLF Convent School, Gurgaon, India
Secondary Education: Physics, Chemistry, Maths, Social Science, Hindi; Percentage: 86.2 *April 2016–May 2019*

Skills Summary

- ***Languages:*** C++, Python
- ***Frameworks & Libraries:*** TensorFlow, Keras, Scikit-learn, Pandas, NumPy, Matplotlib
- ***Tools:*** Git, MySQL, Jupyter Notebooks, VS Code
- ***Platforms & Technologies:*** Windows, Google Cloud Platform (GCP), Machine Learning, Deep Learning, Natural Language Processing (NLP)
- ***Soft Skills:*** Data-driven Decision Making, Complex Data Interpretation, Creating Visual Insights, Team Management

Projects

Solar Panel Detection System using Object Detection Transformer *March 2024 – October 2024*

Python, PyTorch, LabelImg, Roboflow

- Engineered a rooftop solar panel detection system using a custom Object Detection Transformer trained on Indian satellite imagery.
- Collected and fine-tuned data to suit regional rooftop patterns, enhancing model generalisation to Indian urban layouts.
- *Achieved 99% detection accuracy and enabled 20% faster inspection times in simulated urban planning workflows.*

Sign-Language-Recognition using LSTM Model *June 2022 – October 2022*

Python, OpenCV, MediaPipe, LSTM, NumPy, Pandas, Matplotlib, Seaborn

- Designed a deep learning pipeline to recognise hand gestures representing digits ('zero'–'nine') in sign language using a custom dataset.
- Collected and labelled gesture data using OpenCV and MediaPipe Holistic to extract key hand and body landmarks.
- Built and trained an LSTM neural network with 14 sequential and 4 dense layers, optimised for temporal pattern recognition.
- Achieved 94.28% training accuracy and 91.50% test accuracy, outperforming typical industry models by 5%.

Certifications And Achievements

- Certified GitHub Foundation – GitHub, January 2025
- Machine Learning Specialisation – Coursera, September 2024
- Applied Machine Learning in Python – Coursera, January 2023
- LeetCode Problem of the Day Badge – March 2025
- LeetCode Problem of the Day Badge – April 2025
- 50 Days Badge – for maintaining a streak of solving problems 50 days in a row

Co-Curricular Activities

Data Science Simulation - Forage
British Airways

- Completed a simulation project analysing how data science drives business success at British Airways.
- Scraped and analysed customer review data to extract insights on customer sentiment and service feedback.
- Built a predictive model to identify key factors influencing customer purchasing behaviour and flight booking decisions.
- Provided data-driven recommendations to improve customer experience and optimise marketing strategies.

Data Science Hackathon – Kharagpur

- Advanced to Round 2 of the Kharagpur Data Science Hackathon 2025, organised by IIT Kharagpur, by successfully clearing a competitive Round 1 quiz on machine learning, deep learning, and core data science concepts.