Omkar Shenwai

Raipur | omkarshenwai322@gmail.com | 9340358077 | Linkedin | Github

Education

Shri Shankracharya Institute of Professional Management and Technology, Raipur , BTech in Computer Science Engineering — Sept 2023 - June 2027

- GPA: 8.33/ 10
- **Coursework:** Computer Architecture, OOPS, Data Structures, OS, DBMS

Experience

AI/ML Trainee, IIIT Naya Raipur — June 2025 - August 2025

Completed a 45-day vocational training covering Python programming, data preprocessing, feature extraction, and visualization using NumPy, Pandas, Matplotlib, Scikit-learn, and Seaborn. Gained hands-on exposure to machine learning concepts such as bias-variance tradeoff, overfitting, algorithms, and fundamentals of deep learning and optimization (gradient descent, convex optimization). Applied these concepts in a healthcare-focused project titled *Detection of Depression Parameters From EEG Signals*, achieving high accuracy through signal preprocessing, feature engineering, model training, and deployment.

Projects

EEG-Based Depression Detection (Streamlit Deployed) [Live Demo]

- - Developed a machine learning framework to classify depression from EEG signals under Eye Open (EO) and Eye Closed (EC) conditions using the Mumtaz2016 dataset (182 subjects), performed signal preprocessing, frequency-domain feature extraction (FFT), feature selection, model training, and evaluation with SVM, XGBoost, Random Forest, AdaBoost, and KNN.
- Achieved 97.1% accuracy (EO, XGBoost) and 96.4% (EC, AdaBoost) in subject-dependent settings with 5-fold subject-independent validation; deployed the best performing models through an interactive Streamlit web app for real-time EEG-based depression detection.
- Tools used: Python, Scikit-learn, XGBoost, AdaBoost, NumPy, Pandas, Streamlit, Jupyter Notebook, Signal Processing

Flipkart Review Sentiment Analyzer (Streamlit Deployed)[Live Demo]

- - Built and deployed a sentiment analysis app using Streamlit and DistilBERT (92% accuracy) on Flipkart product reviews.
- - Integrated a pre-trained DistilBERT model via Hugging Face Transformers for real-time sentiment classification.
- - Deployed the project using Streamlit Cloud and maintained the codebase with documentation on GitHub.
- Tools Used: Python, Streamlit, Hugging Face Transformers, GitHub, NLP (Sentiment Analysis), DistilBERT

Autonomous Vacuum Cleaner Robot

- - Collaborated with the team to build an Arduino-powered autonomous vacuum cleaning robot and Contributed to motor control logic and hardware integration.
- Key Features: Forward movement through 4 DC motors, real-time debris collection using a vacuum motor, motor control through the Adafruit Motor Shield, and central coordination using Arduino Uno.
- Tools used: Technologies: Arduino Uno, DC Motors, Adafruit Motor Shield

Technologies

Languages: C, C++, Python, SQL

Technologies and Frameworks: NumPy, Pandas, Scikit-learn, Matplotlib, Seaborn, Jupyter Notebook, VS Code, GitHub, Streamlit

Domains: Machine Learning, Deep Learning (basics)