Swayam Burde

swayamburde2004@gmail.com | +91 99706 54760 | linkedin.com/in/swayam-burde | github.com/Swayam-Burde

Education

VIT Bhopal University — Bhopal, India
B.Tech in Computer Science and Engineering (Specialization in AI and ML); CGPA: 8.50/10.00 — *Aug 2023 – Jun 2027*

Mount Litera Zee School — Nagpur, India
Senior Secondary Education, CBSE; Percentage: 70.5/100 — *Mar 2022*

Kendriya Vidyalaya — Nagpur, India
Matriculation, CBSE; Percentage: 86.8/100 — *Mar 2020*

Technical Skills

Programming Languages: Python, C++, Java, SQL
CS Fundamentals: Data Structures and Algorithms, OOP, OS, DBMS, Computer Networks
AI/ML Specialization: Deep Learning, NLP, Transformers, Encoder-Decoder, Attention Mechanisms, Sequence Models
Frameworks & Libraries: Scikit-learn, TensorFlow, PyTorch, Keras, NumPy, Pandas, Matplotlib, OpenCV, Hugging Face
Tools & Platforms: Flask, Streamlit, AWS, Render, GitHub, Google Vertex AI, Docker

Projects

VideoIQ Pro — Nov 2025 – Dec 2025
Multimodal Intelligence Project | *Python, OpenAI Whisper, CLIP, LLaMA-3, Qdrant*

Engineered a dual-stream video analysis pipeline integrating **OpenAI Whisper** for ASR and **CLIP** for visual embedding, enabling granular semantic searches across audio tracks and video frames via natural language.

Orchestrated a **Retrieval-Augmented Generation (RAG)** system using a local **Qdrant** vector database for low-latency retrieval and **Groq's LLaMA-3** for generating context-aware narrative summaries, optimized within a responsive Streamlit UI.

Real Estate Price Predictor — Aug 2025 – Sep 2025
Machine Learning Project | *Python, Pandas, Scikit-learn, Flask, Render*

Trained and compared multiple regression models (CatBoost, XGBoost, Random Forest, Ridge, Lasso) for Ames housing price prediction, selecting models based on R-squared (R^2) performance.

Achieved a best **R^2 of 0.95** with CatBoost Regressor, outperforming XGBoost (0.94) and linear baselines (0.89); deployed the model via a Flask web app for real-time inference.

Student Performance Predictor — Jul 2025
Machine Learning Project | *Python, Pandas, Scikit-learn, Flask*

Built an end-to-end academic performance prediction system, performing extensive data cleaning, missing-value imputation, feature engineering, and exploratory data analysis (EDA) on demographic and academic data.

Benchmarked models including Ridge, CatBoost, and XGBoost, achieving a best **R^2 score of 0.88** with Ridge Regression, significantly improving over weaker baselines like Decision Tree (R^2 = 0.75) and KNN (R^2 = 0.78).

Certifications

Applied Machine Learning in Python - University of Michigan (Coursera) | [Certificate Link]

Cloud Computing - NPTEL | [Certificate Link]

Data Science Bootcamp - Udemy | [Certificate Link]