

Swayam Burde

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EDUCATION

VIT Bhopal University

B.Tech in CSE(Specialization in AI-ML); CGPA: 8.50/10.00

Bhopal, India
Aug 2023 – Jun 2027

Mount Litera Zee School

Senior Secondary Education, CBSE; Percentage: 70.5/100

Nagpur, India
Mar 2022

Kendriya Vidyalaya

Matriculation, CBSE; Percentage: 86.8/100

Nagpur, India
Mar 2020

TECHNICAL SKILLS

Programming Languages: Python, C++, JAVA, SQL

CS Fundamentals: Data Structures and Algorithm, OOPS, Operating System, DBMS, Computer Networks, Machine Learning

Machine Learning & AI: machine learning, deep learning, NLP, transformers, encoder-decoder architectures, attention, sequence models.

Frameworks & Libraries: Scikit-learn, TensorFlow, PyTorch, Keras, NumPy, Pandas, Matplotlib, Seaborn, OpenCV, Hugging Face Transformers, spaCy, NLTK.

Tools & Platforms: Flask, Streamlit, AWS, Render, GitHub, Google Vertex AI

PROJECTS

Student Performance Predictor

Jul 2025

Machine Learning Project

Python, Pandas, Scikit-learn, Flask

- Built an end-to-end student academic performance prediction system using Python, Pandas, and Scikit-learn, performing data cleaning, missing-value imputation, feature engineering, and exploratory data analysis on demographic, behavioral, and academic data.
- Trained and benchmarked multiple models (Ridge, Linear Regression, CatBoost, Random Forest, AdaBoost, XGBoost, Lasso, KNN, Decision Tree), achieving a best R^2 score of 0.88 with Ridge and Linear Regression, while significantly improving over weaker baselines such as Decision Tree ($R^2 = 0.75$) and KNN ($R^2 = 0.78$).

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, Linear/Ridge/Lasso, AdaBoost, KNN, Decision Tree) for Ames housing price prediction, selecting models based on R^2 performance.
- Achieved a best R^2 of 0.95 with CatBoost Regressor, beating XGBRegressor (0.94), Random Forest (0.92), and linear baselines (0.89), then deployed the chosen model in a Flask web app for real-time price estimation.

VideoIQ Pro

Nov 2025 – Dec 2025

Generative AI & Multimodal Intelligence Project

Python, Streamlit, OpenAI Whisper, CLIP, LLaMA-3, Qdrant, MoviePy

- Engineered a dual-stream video analysis pipeline integrating OpenAI Whisper for ASR and CLIP for visual embedding, enabling users to perform granular semantic searches across both spoken audio tracks and video frames via natural language queries.
- 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 featuring dynamic asynchronous task tracking.

CERTIFICATIONS

Applied Machine Learning in Python - University of Michigan (Coursera)

Cloud Computing - NPTEL

Data Science Bootcamp - Udemy