ARCHITA SHRIVASTAVA

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EDUCATION

Vellore Institute of Technology

B.Tech in Computer Science, CGPA: 8.40

Delhi Public School Kolar Road

Class XII (CBSE)

Delhi Public School Kolar Road

Class X (CBSE)

November 2022- May 2026

Bhopal, India

March 2021- May 2022

Bhopal, India

March 2019- May 2020

Bhopal, India

TECHNICAL SKILLS

Machine Learning (Supervised & Unsupervised Techniques, Model Evaluation, Hyperparameter Tuning), TensorFlow, OpenCV, AWS, Streamlit, Flask, Python, SQL, C++

EXPERIENCE

Data Science and Analytics Intern | Zidio Development

January 2025 - February 2025

- Developed automated ETL workflows using Python (Pandas, NumPy) to process large-scale IPL datasets, reducing preprocessing time by 70%.
- Implemented and benchmarked supervised & unsupervised ML models (K-Means, Logistic Regression, Random Forest, Linear Regression), optimizing hyperparameters to attain ~88% accuracy.
- Constructed interactive dashboards with Matplotlib and Seaborn, equipping stakeholders with actionable insights on player performance and team strategies.
- Delivered a Sports Analytics: Predicting IPL Match Outcomes with ML using feature engineering (strike rate, economy rate, win-loss history), recording ~85% forecast accuracy.

PROJECTS

Smart Vision System for Real-Time Vehicle Analytics

May 2025 - June 2025

- Implemented a YOLOv8-based detection system for 12+ vehicle classes and 767+ images, achieving 86.8% mAP, 92.2% precision, and 81.1% recall—including low-light robustness.
- Deployed a Streamlit + OpenCV dashboard for real-time vehicle counts and monitoring, designed with enterprise-style analytics.
- Enhanced inference speed and accuracy, balancing model performance for edge deployment.
- Synthesized business insights from detection results with automated reports, data visualizations, and summary tables to drive data-driven decisions.

VitalAI: Scalable Healthcare Prediction API

September 2024 - December 2024

- Engineered end-to-end predictive models for Diabetes, Heart Disease, and Blood Sugar using XGBoost, SVM, and CatBoost, achieving ROC-AUC up to 0.88 and ensuring interpretability with LIME and SHAP.
- Applied advanced feature engineering (BMI–Pulse Pressure ratios, polynomial & interaction terms) and EDA with correlation analysis to enhance predictive performance while maintaining medical relevance.
- Designed modular ML pipelines with preprocessing (imputation, scaling, encoding), serialized via joblib, ensuring scalable and reproducible training-to-inference workflows.
- Launched models as RESTful APIs using FastAPI, enabling real-time healthcare predictions and seamless integration into enterprise digital health platforms.

Intelligent Conversational System on PDF Files

March 2024 - April 2024

- Developed an NLP-driven semantic search system using LangChain, Faiss, and PyPDF2 to extract and interpret information from unstructured PDF documents.
- Executed vector-embedding-based retrieval, enabling context-aware answers beyond simple keyword search and improving interpretability for complex queries.
- Built an interactive Streamlit + Gemini Q&A interface, enabling users to query 50+ page documents conversationally and extract insights in real time.
- Simplified large-scale document review workflows (audits, contracts, compliance), attaining 75%+ retrieval accuracy and reducing manual analysis effort by over 60%.

CERTIFICATIONS

AWS Solutions Architect - Associate Certification (Ethnus)

April 2025

 Demonstrating proficiency in designing secure, scalable, and cost-optimized cloud architectures and hands-on experience with AWS services, including EC2, VPC, Route 53, IAM (users, groups, policies), CloudWatch, and RDS.

Getting Started with Artificial Intelligence (IBM)

April 2025

· Gained foundational knowledge in AI, understanding core AI concepts, machine learning principles, and practical applications

EXTRA CURRICULARS

Social Work Intern | Kshitiksha Foundation

June 2023 - July 2023

• Contributed to social and environmental causes by planting trees on barren land, distributing food to underprivileged children, and caring for stray animals.