

Aryan Vinod Deshpande

📍 Pune, India

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Education

Vellore Institute of Technology, Vellore, India

Aug 2023 - Jul 2027

B.Tech in Information Technology

- **CGPA:** 8.72/10
- **Coursework:** Data Structures and Algorithms, DBMS, OS, OOP, Computer Networks, Statistics, Machine Learning

DAV Public School, Pune, India

May 2023 & May 2021


AISSCE (Science) & AISSE

- **12th Class Percentage:** 89.40 **10th Class Percentage:** 92.20
- **Coursework:** Informatics Practices, Mathematics, Physics, Chemistry

Projects

End-to-end ML Pipeline on AWS

[GitHub](#) 

- Built a production-grade ML pipeline (including ETL) using a medallion architecture that ingests flight-delay data and optimizes query performance by ~70% using **Amazon Athena** with Parquet and partitioning on **S3**.
- Trained an **XGBoost** delay-prediction model on **Amazon SageMaker** and deployed real-time inference via FastAPI on **EC2** (Nginx+Docker), along with a **Power BI** dashboard using an ODBC driver.
- Reduced infrastructure costs by ~80% with serverless ETL alternative ([GitHub](#) ) using **AWS Glue and Lambda**.

Geo-PhotoVault App

[GitHub](#) 

- Developed a location-based camera app in **Flutter**, enabling automatic organization of captured photos into city-specific folders based on GPS metadata, achieving **faster photo retrieval** compared to standard gallery apps.
- Integrated **Google Maps API**, allowing location visualization on an interactive map interface.
- Implemented location-based filter and customizable light/dark themes.

Hackulus'25 Backend Portal

[GitHub](#) 

- Constructed the official backend for **Hackulus'25**, SIAM-VIT's flagship hackathon with 150+ participants, using **Node.js**, **Express.js**, and **PostgreSQL**, achieving more than **99% uptime** during the event.
- Designed and launched secure **REST APIs** for managing tracks, submissions, and admin workflows, reducing manual admin time by 30%.
- Incorporated **JWT-based authentication**, rigorous validation and error handling, improving system stability.

Chemical Reaction Catalyst Predictor

[GitHub](#) 

- Developed an ML system to predict the **optimal catalyst** for a given chemical reaction using molecular fingerprints (**RDKit Morgan**), reducing reliance on physical lab trials by approximately 45%.
- Built an **SGD Classifier** pipeline including preprocessing for data cleaning, normalization, and class balancing, improving predictive recall and maintaining an **accuracy of 85.4%**.
- Employed **joblib** for reproducible and efficient inference deployment, reducing model load time by about 60%.

Technical & Leadership Experience

Society for Industrial and Applied Mathematics - VIT

Vellore, India

Projects Head

Jan 2025 – Present

Led **tech projects** and coordinated with development, design, and core teams to ensure smooth execution. Conducted technical interviews to maintain code quality and team efficiency, mentored juniors, and managed **financial operations**.

IEEE Computer Society - VIT

Vellore, India

Core Committee Member - App Development

Jan 2024 – Jan 2025

Enhanced **Flutter apps** through modular components, performance tuning, and self-check mechanisms for bug detection.

Skills and Certifications

Languages & Web: C++, Python, Dart, SQL, HTML, CSS

Cloud & Backend: AWS (SageMaker, EC2, S3, Lambda, Glue, Athena, IAM), Express.js, PostgreSQL, SQL*Plus

Frameworks & Libraries: Flutter, NumPy, Pandas, Matplotlib

Tools: Power BI, Postman, Git, Android Studio

Certifications: AWS Certified Cloud Practitioner (CLF-C02) [Link](#) , Generative AI using **IBM Watsonx** [Link](#) 