

MOKSH DOSHI

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Education

Vellore Institute of Technology

Bachelor of Technology in Computer Science and Engineering

Expected May 2026

CGPA: 8.3

Technical Skills

Languages: Python, JavaScript, SQL, Bash

Developer Tools: VS Code, Docker, Git, Postman, Firebase

Technologies/Frameworks: FastAPI, React, PyTorch, TensorFlow

Projects

Agentic Financial Toolkit (MCP Server) |*Python, FastAPI, Docker, Pytest, AsyncIO*

Dec 2025

- Architected an asynchronous Model Context Protocol (MCP) server to autonomize financial data analysis, reducing manual document extraction cycles by **40% for complex banking statements**.
- Engineered high-concurrency request handling using **AsyncIO and FastAPI**, scaling throughput to handle 50+ concurrent requests with **<200ms latency**.
- Orchestrated a comprehensive testing pipeline using **Pytest and Docker** containers, achieving **96% code coverage** and ensuring zero regression bugs during modular upgrades.

AI-Generated Image Detection System |*PyTorch, ResNet-50, OpenCV, Grad-CAM*

Oct 2025

- Co-authored a research paper validating this hybrid architecture, accepted for publication in **IEEE Journal (Upcoming March 2026)**, establishing the model's efficacy in deepfake forensics.
- Developed a deep learning model to detect AI-generated images vs. real photographs, achieving **93% accuracy** on a dataset of **190,000+** images using Transfer Learning (ResNet-50).
- Integrated **Grad-CAM** (Gradient-weighted Class Activation Mapping) to visualize model decision-making, providing interpretability for forensic analysis of image manipulation artifacts.
- Optimized the training pipeline using data augmentation (rotation, scaling), reducing overfitting and improving validation **accuracy by 12% on synthetic datasets**.

Python Dependency Compatibility Manager |*Python, CLI, PyPI API, Docker*

May 2025

- Built a **CLI** tool that automates the resolution of conflicting Python library dependencies by querying the PyPI REST API, cutting environment setup debugging time by **~50%**.
- Implemented intelligent version constraint solving algorithms to resolve conflicts in projects with **20+ active dependencies**, reducing manual resolution time by 90%.
- Packaged the application for easy distribution, allowing developers to install and run the tool directly via **command line for immediate workflow integration**.

Leadership Experience

Edu4U Club

Aug 2024 – Aug 2025

Co-lead Technical Team

- Directed the full-stack development of the official club platform using **React and Firebase**, handling high-traffic registration forms for **3 major university events**.
- Scaled digital outreach initiatives to support **52+ active members**, implementing automated data collection pipelines that improved administrative efficiency by 30%.

Achievements

Secured **Global Top ~2% (Rank 900/78,000+)** in the **Amazon ML Challenge 2025** by engineering a robust price-prediction model trained on a **1.5L+** dataset.

Championed the **winning solution (1st Place)** at the **Hack for India Hackathon (HackerEarth & aiXplain)**, leading a team to deploy a **novel AI-powered women safety Application**.

Attained a rating of **1568 (LeetCode)** and **1015 (Codeforces)** through active participation in weekly contests.

Certification

OCI Developer Professional - Oracle,2025

OCI Data Science Professional - Oracle,2025