

MOHAMMED LOKHANDWALA

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EDUCATION

P.P Savani University

B.Tech in Computer Science (AI & ML specialization) — CGPA: 8.1

SEP 2022 – SEP 2026

Surat, Gujarat

EXPERIENCE

Seepossible Innovative Solutions LLP

AI/ML Intern

Jun 2024 – Jun 2024

Surat, Gujarat

- **Conducted R&D** on 2D-to-3D reconstruction and photogrammetry-based asset generation to explore automation of 3D model workflows from jewelry photos.
- **Built and deployed an image upscaling API** that lets users submit images with custom parameters (model type, resolution, size), secured with authentication and real-time quota tracking using Supabase — processed **5,000+ images** with **99.9% uptime**
- **Fine-tuned a deep learning super-resolution model** specifically for jewelry imagery, achieving a **28% increase** in perceptual image quality (measured via LPIPS and PSNR) improving clarity and sharpness while preserving details.
- **Used Weights & Biases for experiment tracking, model versioning, and performance visualization**, enabling reproducible training workflows for both upscaling and interpolation pipelines.
- **Implemented a real-time quota and user usage tracking system**, that supported **100+ concurrent users** without latency spikes
- **Developed a CLI based frame interpolation system** to generate intermediate video frames from existing renders, eliminating the need for costly re-rendering — reducing post-production time and computational cost by nearly **50%**.
- **Enhanced the interpolation model** through architectural tweaks, hyperparameter tuning, and post-processing strategies and boosting frame coherence by **32%** (based on temporal SSIM metrics).

PROJECTS

Local Codebase Search Engine: (React, Flask, ChromaDB and Python)

- Created a local code search engine to navigate large codebases efficiently without relying on external tools or services.
- Wrote a **custom OS-level file crawler** with support for regex and **semantic chunking** to break code into meaningful segments.
- Used **MiniLM embeddings** with **ChromaDB** to implement fast, vector-based code similarity search.
- Added language-aware static analysis using **tree parsing** to improve search accuracy with symbol recognition and context-aware results.

Local ML Experiment Tracker: (MERN, Python, Vite, Redux, Typescript)

- Built a full-stack, offline ML experiment tracker like **ML FLOW** to log, visualize, and compare training metrics, configurations, and results.
- Developed a **RESTful Node.js API** for handling versioned uploads, metadata storage, and log processing, with a React dashboard using **Recharts** for real-time visualization.
- Created a **custom Python SDK** for logging directly from script and CLI automatically without manual adding.
- Implemented backend logic for config comparisons, metric aggregation, and automatic plot handling (Matplotlib/CSV/JSON), storing data in MongoDB and on local disk.

Billing and Inventory Management System: (MERN, Tailwind+Vite, Shadcn)

- Developed a complete billing and inventory system with features like product cataloging, discount rules, stock management, and invoice generation.
- **Deployed at a local retail store** and used daily for handling sales, inventory updates, and reports.
- Built real-time inventory sync and role-based access (admin/cashier), with modular components for managing products, customers, and sales data.
- **Integrated thermal receipt** printing and barcode generation from the UI to work smoothly with standard retail hardware.

TECHNICAL SKILLS

Languages: Python, C, C++, JavaScript, SQL, HTML, CSS, Java

Developer Tools: VS Code, Android Studio, Matlab, Streamlit, Weight & Biases, Render, PowerBI, Tableau

Technologies/Frameworks: Linux, GitHub, ReactJS, Redux, NodeJS, ExpressJS, Git, MongoDB, Angular, Express, Vite, Tailwind, Tensorflow, Pytorch

COURSEWORK

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|--------------------------------|-------------------------------------|----------------------|----------------------------|
| • Data Structures & Algorithms | • Database Management System (DBMS) | • Web Development | • Probability & Statistics |
| • Operating Systems | • Artificial Intelligence | • Deep Learning | • Machine Learning |
| | | • Business Analytics | • Calculus |

LEADERSHIP & ACTIVITIES

Google Student Developer Club

- Active member of Google Student Developer Club of college for 2 years.
- Organized more than 5+ successful event while working with the team.

P.P Savani University

- Selected as Hostel's Floor Representative due to leadership skills.
- An Active Member of Hostel's Cultural Committee and helped organize various events.

GATE

- Have cleared GATE exam in 3rd year

CERTIFICATIONS

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| • Machine Learning with Python - Coursera (IBM) | • The Bits and Bytes of Computer Networking - Coursera (Google) |
| • Introduction to Deep Learning & Neural Networks with Keras - Coursera(IBM) | • Python for Everybody Specialization |
| • Introduction to computer Vision and Image Processing - Coursera(IBM) | • Responsive Web Design - FreeCodeCamp |
| • Natural Language Proccessing- NPTEL | • 5 Stars in C++ in Hackerrank |
| • Data Science Program - Devtown (180 hrs) | • Communication Skills - Trinity College London |