

# MOHAMMED LOKHANDWALA

Surat, Gujarat

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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 — 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** using Supabase, 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

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**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

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### 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.

### Student Startup and Innovation Policy (SSIP)

- Granted a ₹50,000 SSIP award for AI robotic Innovation with funds being released as per project milestones. .

## GATE

- Have cleared GATE examination 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 Processing- NPTEL   | • <b>5 Stars</b> in C++ in Hackerrank                           |
| • Data Science Program - Devtown (180 hrs)                                   | • Communication Skills - Trinity College London                 |