

Akshay Mohan

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PROFILE

AI/ML Engineer in training with a strong foundation in **Python, Machine Learning, Data Science, SQL, and Exploratory Data Analysis**. Hands-on experience building **end-to-end ML pipelines** using real-world datasets (20K+ samples), model evaluation, and feature importance analysis. Currently upskilling through a structured **Data Science, Machine Learning & MLOps program at Skillianz**, with a long-term goal of contributing to scalable AI systems at top product-based companies.

PROFESSIONAL EXPERIENCE

Software Developer

08/2026 – Present

GDMR Foundation

Trivandrum

- **Developed** high-performance web applications, improving overall system efficiency by 25%.
- **Designed** and deployed secure REST APIs and database models to support scalable backend services.
- **Automated** deployment pipelines using CI/CD tools, reducing weekly release times by 40%.
- **Collaborated** with Agile teams to review code, debug issues, and deliver features on schedule.

Junior Web Developer

03/2025 – 08/2026

GDMR Foundation

Trivandrum

- Built and maintained WordPress-based systems, including an internal HRMS using React, Python, and MongoDB.
- Utilized AI-assisted tools to speed up development, enhance code quality, and streamline workflows.
- Developed strong full-stack, REST API, and deployment skills — forming a solid base for AI/ML engineering.

Junior Web Developer

01/2024 – 03/2025

Websorbz Pvt Ltd

kollam,India

- Developed and maintained websites using **WordPress, HTML, CSS, JavaScript**.
- Integrated APIs, optimized performance, and improved UI/UX.
- Built strong problem-solving, debugging, and software engineering fundamentals transferable to ML systems.

SKILLS

Programming & Data — Python, SQL, pandas, NumPy, **Machine Learning & AI** — Machine Learning, Data Science, Feature Engineering, EDA, Regression, Random Forest, Model Evaluation, End-to-End ML, **Libraries & Tools** — scikit-learn, matplotlib, Git, GitHub, **Foundations (Learning)** — Data Structures & Algorithms, Statistics, Deep Learning (PyTorch – beginner), NLP (beginner), Model Deployment (intro), REST APIs

PROJECTS

AI Career Intelligence Platform [🔗](#)

06/2026 – Present

Next.js, FastAPI, PostgreSQL, Docker, Groq LLM, ChromaDB

Full-stack web application that matches a user's resume against job postings using skill-extraction and a retrieval-augmented generation (RAG) pipeline for AI-driven career guidance.

- Built a JWT-authenticated FastAPI backend (layered router/service/repository architecture) and a Next.js/TypeScript frontend, covering resume upload/parsing, job matching, and skill-gap analysis
- Implemented a RAG pipeline (ChromaDB vector search + Groq LLM) to ground AI-generated career advice in a curated knowledge base, with topic-scoped guardrails to keep responses on-task
- Containerized the full stack with Docker and deployed it to production (Railway + PostgreSQL for the backend, Vercel for the frontend), including CORS and environment-based configuration for a clean local/production split
- Diagnosed and fixed a production startup crash from a deploy log alone — an external API client was being constructed eagerly at import time, taking down the entire app when a key was unset — refactored to lazy initialization with graceful fallback
- Reduced Docker build time by ~90% by auditing and removing an unused dependency chain (PyTorch/sentence-transformers) that wasn't actually load-bearing for any feature

California Housing Price Prediction [🔗](#)

- Built an **end-to-end ML regression pipeline** using the California Housing dataset (**20,640 rows, 8 features**).
- Performed **EDA** and correlation analysis to identify key predictors of house prices.
- Trained and evaluated **Linear Regression (baseline)** and **Random Forest Regressor (final model)**.
- Achieved **$R^2 \approx 0.81$, $MAE \approx 0.33$, $RMSE \approx 0.50$** with Random Forest.
- Conducted **feature importance analysis**, identifying **Median Income** as the strongest predictor (~ 0.53).
- Tech stack: Python, pandas, scikit-learn, NumPy, matplotlib.

EDUCATION

B.Tech in Computer Science & Engineering

08/2019 – 08/2023

UKF College of Engineering and Technology

Kollam, India

- Core coursework: Programming Fundamentals, Data Structures, Algorithms, Databases, Software Engineering
- Built a strong foundation in **problem-solving, programming, and computer science fundamentals**, supporting my transition into **AI/ML Engineering**