

Durgesh Dutt Sinha

AIML Engineer & Full-Stack Developer

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EXECUTIVE SUMMARY

Forward-thinking **AIML Engineer & Full-Stack Architect** pursuing an MCA in Artificial Intelligence & Machine Learning at Sri Balaji University, Pune (2025–2027). Selected as an **UNLOX® AI Program Fellow** and **Be10x AI Cohort Member**. Demonstrates proven delivery of production-ready systems including real-time computer vision pose estimation engines (<50ms inference), enterprise ATS resume evaluation platforms with Google XYZ bullet transformers, and unsupervised retail customer intelligence suites.

TECHNICAL COMPETENCIES

- AI & Machine Learning:** Autonomous AI Agents, Prompt Engineering, Google MediaPipe Computer Vision, Scikit-Learn (K-Means, GMM, DBSCAN), PyTorch, CNNs, Whisper STT.
- Full-Stack & Cloud:** Next.js 16/15 (App Router), React 19/18, TypeScript 5.x, Drizzle ORM, PostgreSQL (Neon), Tailwind CSS v4, WebSockets, FastAPI, Docker.
- Architecture & DevOps:** Cloudflare Pages Edge CDN, AWS Cloud ML Pipelines, GitHub Actions CI/CD, Dual-Mode Storage Resiliency, Web Workers concurrency.
- Practices & Tooling:** System Architecture Design, Clean Code, Test-Driven Development, WCAG 2.1 AA Accessibility, Git / GitHub, Turbopack, Vite.

PRODUCTION ENGINEERING PROJECTS

RoleRadar — AI Career Intelligence & ATS Resume Engineering Platform

July 2026 – Present

RoleRadar is an enterprise-grade career intelligence platform evaluating candidate resumes across 16 modern tech roles with an automated 8-point ATS compatibility scanner, dynamic Google XYZ bullet optimizer, and personalized multi-week learning roadmaps.

- User uploads resume document (.pdf / .docx) or pastes text directly.
- Document parsing pipeline extracts text, sanitizes non-standard Unicode, and validates byte limits.
- Keyword normalizer matches terms against the 16-role benchmark or user-supplied custom Job Description.

Tech Stack: Next.js 16.2 • React 19 • TypeScript 5.9 • Drizzle ORM • PostgreSQL (Neon) • Tailwind CSS v4 • pdf-parse & mammoth

FitTrack AI Fitness Platform — Edge Computer Vision & Real-Time

August 2026 – Present

Biomechanical Feedback Platform

FitTrack is a production-grade 9-page multi-modal fitness architecture utilizing Google MediaPipe 33-point skeletal landmark detection, trigonometric joint-angle vector kinematics, and web worker isolation to provide real-time form correction under 50ms latency.

- User grants webcam permission; video element acquires 720p feed.
- Frames are captured and piped into a dedicated Web Worker via transferable ImageBitmap.
- MediaPipe predicts 33 3D skeletal coordinates with sub-50ms inference.

Tech Stack: TypeScript • Google MediaPipe Pose • Web Workers API • WebSockets • Canvas 2D / WebGL • Tailwind CSS

MarketMatch-AI — Enterprise E-Commerce RFM Customer Intelligence & Lookalike Studio

July 2026 – Present

An enterprise customer segmentation and lookalike audience platform transforming 4,000 retail records into actionable marketing cohorts using log-transformed RFM feature engineering, K-Means (\$K=5\$), Gaussian Mixture Models (GMM), and DBSCAN anomaly detection.

- Raw transaction ledger ingested via CSV (Customer ID, Invoice Date, Quantity, Price).
- RFM feature transformation computes Recency, Frequency, and Monetary Value per customer.
- Log1p scaling and StandardScaler normalize skewed monetary distributions.

Tech Stack: Python 3.11 • Scikit-Learn • Streamlit • Plotly 3D • Pandas & NumPy • Joblib

FELLOWSHIPS & ENGINEERING EXPERIENCE

AI Program Fellow — UNLOX®

Jun 2026 – Present | Remote

- Engineered end-to-end AI deployment pipelines with automated containerization.
- Constructed and benchmarked autonomous agent workflows for enterprise industry use-cases.
- Executed production-grade machine learning models under direct technical mentorship.

AI Cohort Member — Be10x

May 2026 – Present | India

- Developed multi-step LLM prompt chaining architectures to automate repetitive tasks.
- Built full-stack AI concept prototypes from initial system design to live client demonstrations.

EDUCATION

Master of Computer Applications (AIML)

Jul 2025 – 2027 (Expected)

Sri Balaji University, Pune

Specialization: Artificial Intelligence & Machine Learning

Bachelor of Computer Applications

Aug 2022 – Apr 2025

Sri Balaji University, Pune

Focus: AI, System Architecture, Prompt Engineering

CREDENTIALS & CERTIFICATIONS

- **AWS Educate Emerging Talent Community Member** — Amazon Web Services (AWS)
- **AWS Educate Machine Learning Foundations** — Amazon Web Services (AWS)