

Shubham Mahesh Mohole

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Product-minded software engineer with 2+ years of experience building large-scale backend systems and GenAI tools, including Spring Boot microservices and AI-powered automation shipped to production.

EDUCATION

University at Buffalo, SUNY

M.S. in Computer Science

GPA: 3.7/4

Buffalo, NY, USA

Aug 2024 – Dec 2025

Relevant Courses: Algorithms, Machine Learning, Computer Vision, Database Systems, Deep Learning, Operating Systems

University of Pune

Bachelor of Engineering

GPA: 8.7/10

Pune, MH, India

Aug 2018 – May 2022

SKILLS

- **AI / ML:** LLMs, Prompt Engineering, LangChain, Semantic Search, Stable Diffusion, LoRA
- **Languages:** Python, Java, SQL, JavaScript, C++
- **Frameworks:** Spring Boot, TensorFlow, PyTorch, Scikit-learn, Angular, React
- **Cloud / DevOps:** AWS, Docker, Kubernetes, Jenkins, CI/CD, OCI
- **Tools:** Git, JIRA, Agile/Scrum, Redis, Figma, Postman

PROFESSIONAL EXPERIENCE

Infosys Ltd.

Software Developer — Full Stack Developer

Pune, India

Nov 2022 – June 2024

- Owned onboarding service improvements in partnership with PMs; optimized Java/Spring Boot microservices, reducing onboarding time by 25% across 5M+ daily transactions.
- Led frontend redesign for 3 Angular applications, increasing engagement by 30% and reducing support tickets by 40%.
- Integrated external credit APIs and automated loan workflows, cutting approval time from 14 days to under 1 hour.
- Improved system performance by optimizing MySQL queries and Redis caching, achieving 90% gains and P99 latency of 40ms on 1B+ records.

Tech Stack: Java 17, Spring Boot, Angular, MySQL, Redis, Docker, Kubernetes, Jenkins, CI/CD, REST APIs, Git, JIRA

University at Buffalo, SUNY

Research Assistant — Robotics & AI (Advisor: Prof. Nalini Rath)

Buffalo, NY, USA

Aug 2025 – Present

- Analyzed real-world deployments of the Unitree GO2 quadruped to diagnose navigation failures arising from environmental uncertainty, sensor noise, and sim-to-real gaps.
- Continuing post-graduation, developing olfactory sensing and feature extraction pipelines that fuse chemical, state, and motion signals to improve locomotion robustness in unseen environments.

PMS Robotics Lab

Software Engineer Intern — Robotics AI Lab

Pune, India

May 2022 – Nov 2022

- Improved robotic path accuracy by developing ML-based control algorithms for adaptive terrain navigation.
- Simulated and validated autonomous behaviors across legged and wheeled robotic platforms.

PROJECTS

Distributed Rate Limiter — Production-Grade Service

Jan 2026

- Built a distributed rate limiting service using Redis and Lua scripts to guarantee atomic enforcement across multiple application instances.
- Implemented token bucket, fixed window, sliding window log, and sliding window counter algorithms using the Strategy pattern.
- Designed and verified a sliding window counter achieving O(1) memory with near-sliding accuracy; validated approximation bounds via custom Redis-level verification scripts.
- Integrated fail-open resilience, Prometheus metrics, and structured logging for production observability and safe degradation.

LLM-Powered Text-to-Image System

Jan 2025 – Apr 2025

- Improved low-fidelity text-to-image outputs by building an end-to-end Stable Diffusion pipeline with LoRA fine-tuning, increasing output quality by 25%.
- Iterated on prompts with human-in-the-loop evaluation, improving perceived image fidelity and prompt adherence.

DevSync AI – Autonomous Release Coordinator

Aug – Sep 2025

- Built an AI-powered release coordination tool integrating GitHub, JIRA, and Slack to automate sprint updates and changelog generation.
- Deployed via Docker and CI/CD pipelines; improved reliability through webhook validation and configuration management.

Open Source Contribution — DjangoCRM

May – Jun 2025

- Refactored hardcoded email constants into a configurable `MassmailSettings` singleton via Django Admin.
- Implemented permission checks and import refactoring; changes merged upstream (PR #229).
- GitHub PR: github.com/DjangoCRM/django-crm/pull/229

CERTIFICATIONS

OCI 2025 Certified Foundations Associate — OCI 2025 Certified AI Foundations Associate — OCI 2025 Certified Generative AI Professional