

Aditya Dalmia

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SUMMARY

Software Engineer with ~7.5 years of experience spanning large-scale backend architecture (Go, Java, Node.js, Python) and AI agent evaluation. Previously built reinforcement learning (RL) evaluation environments and benchmarking infrastructure for frontier AI research labs, and contributed to **FrontierSWE**, a public benchmark for ultra-long-horizon coding agents. Track record of leading technical teams, designing systems at 1M+ RPM scale, and shipping LLM- and blockchain-powered products with tangible business impact.

SKILLS

Languages: Python, Go, Java, TypeScript, JavaScript

AI & Agent Systems: LLM/coding-agent evaluation, RL environments, benchmark design, agent harnesses (Claude Code, Codex, Gemini CLI, Cursor CLI), DSPy, LangChain, LangGraph, CrewAI, LiteLLM, Langfuse, Arize AI Phoenix

Frameworks, Technologies & Libraries: Spring Boot, Kafka, NodeJs, NestJS, ExpressJS, GraphQL, FastAPI, gRPC, pandas, TA-lib, Supabase, OpenCV, scikit-learn

Databases: PostgreSQL, MongoDB, MySQL, Redis, DynamoDB, Elasticsearch, Aerospike, ScyllaDB

Cloud & Infra: AWS (Lambda, S3, SQS, SES, Fargate, Athena, CloudFormation), Azure, Docker, Kubernetes, Jenkins, GitLab CI/CD

Blockchain: Solidity, Hardhat, Neon EVM (Solana), Filecoin, Escrow Smart Contracts

EXPERIENCE

Member of Technical Staff

Proximal Labs

February 2026 – July 2026, Bengaluru

- Engineer **reinforcement learning (RL) evaluation frameworks and environments** for frontier AI research labs including **Anthropic, Google DeepMind, Meta, and xAI**, used to evaluate and improve the reasoning capabilities of advanced LLM agents.
- Contributor to **FrontierSWE** (Proximal Blog, April 2026) — a public benchmark of 17 ultra-long-horizon engineering tasks with a 20-hour agent budget each, spanning implementation, performance engineering, and ML research, built with partners including Modular, Prime Intellect, and Thoughtful Lab; one of the few remaining unsaturated public coding benchmarks.
- Build **evaluation infrastructure and benchmarks** for LLM agents, coding agents, and long-horizon tasks, measuring reasoning, planning, tool use, and task completion via continuous 0–1 grading with mean@5 / best@5 scoring across multi-trial runs.
- Lead **research into coding agent performance**, benchmarking agents across multiple harnesses (Claude Code, Codex, Gemini CLI, Cursor CLI, Grok CLI) to identify capability gaps and long-horizon failure modes — reward hacking, overconfident early submission, and loss of prior progress — and drive model improvements.

Staff Software Engineer

Zepto

July 2025 – February 2026, Bengaluru

- Key stakeholder for **architectural design and optimization** for ShopX pre-order workflows focusing on Layout Management Service (350k RPM) and Store Product Manager (1.2M RPM) utilised in quick commerce industry.
- **Rearchitected** Layout Management Service using Go microservices with real-time testing, point-in-time recovery, approval workflows, and audit logging built in from day one, enabling better long-term scalability and system reliability.
- **Conducted POC for Profile Guided Optimization (PGO)** in Go services, achieving 14% CPU cost reduction, and drove adoption across the microservice fleet.
- Migrated gRPC definitions from protobuf to vtproto, achieving **5% RAM reduction and 12% CPU improvement** for high-throughput APIs.
- **Prototyped AI coding agents for developer experience improvements**, focusing on org-guideline code reviews, memory-aware context management, and test automation; built service-specific memory banks enabling agents to contribute meaningfully in feature development.

Staff Software Engineer

Stealth Startup

June 2024 – July 2025, Hyderabad

- **Led a team of 7 engineers**, designed and developed the core backend architecture for a fully decentralized creator monetization platform using **NestJS (Node.js), PostgreSQL, Redis, Kafka**, and Kysely.

- **Prototyped an LLM-powered** crypto market analysis system using **DSPy** for modular reasoning, integrating technical indicators and structured data pipelines; evaluated model providers and compared meta-prompting with fine-tuning approaches.
- **Architected a crypto trading strategy backtesting platform** using **Python, AWS Lambda, TA-lib, DynamoDB**, achieving 18,000 users.
- **Developed a blockchain-based crypto payment gateway** with **NestJS, deterministic wallet addresses, DynamoDB storage**, for EVM compatible blockchain, securely managing over \$75k+ in transactions and ongoing.
- **Implemented secure real-time chat functionality** for the decentralized platform using **FastAPI and Supabase realtime**, significantly enhancing user engagement and platform reliability.
- **Built a geospatial food vendor discovery** and onboarding platform for 30k+ food shops in Europe using **NestJS, NodeJs, GraphQL, MongoDB, Kafka**, powering campaign visibility and search UX.
- **Built a cost-effective, high-accuracy location-based search engine** using **OpenStreetMap and Photon Search**, replacing Google Maps to significantly reduce API costs while maintaining UX and search precision.
- **Designed and scaled a real-time gaming platform** inside Telegram using **Java and MySQL**, handling 35k MAU and 18k DAU with transactional state changes and leaderboard mechanics.
- **Integrated decentralized storage using Storacha + Filecoin**, enabling true data ownership and gated content access via signed AWS CDN links.

Staff Software Engineer

Tekion

June 2019 – May 2024, Bengaluru

- Architected Tekion's **Accounting-Core module** backend using **Java, Spring Boot, MongoDB, MySQL, Elasticsearch, AWS** microservices, significantly enhancing the system's scalability and flexibility.
- Awarded "**Top Performer 2022**" for consistently driving high-impact technical solutions and exemplary team leadership.
- **Managed a technical team of 9 engineers**, ensuring efficient project delivery, agile execution, and high-quality standards for the European launch.
- Led **monolithic to microservices migration**, breaking down complex services into independently deployable components, reducing system maintenance overhead. Managed and maintained 12+ microservices for >2 years.
- Developed a **runtime-configurable backend framework** using MongoDB and Spring Boot, enabling client customizations without downtime.
- Built high-throughput **reporting and document generation pipelines** using **AWS Lambda, SQS, and API Gateway** to generate CSV, PDF, and Excel outputs. Enabled seamless integration across 30+ microservices, cutting downstream processing load by 60% and reducing report latency from minutes to seconds in production.
- Built internal **developer productivity tools** integrating GitLab APIs, MongoDB, and Elasticsearch, enhancing code review efficiency and team productivity significantly.
- Built **scalable onboarding pipelines handling 2–5 billion documents monthly** using AWS Athena, Fargate, Kafka, MongoDB — reducing client onboarding time from 12+ hours to under 2 hours.
- Streamlined release cycles by coordinating with QA and track lead stakeholders, utilizing automated testing tools to enhance system stability.
- Engineered **advanced analytics pipelines** leveraging Elasticsearch, MongoDB, SQL, and Redis to optimize features such as expense analysis and scheduling insights.

Associate Software Engineer

WiseL

January 2019 – June 2019, Gandhinagar

- Optimized **OCR algorithm** using OpenCV, scikit-learn, and NumPy to enhance processing speed by 20% while maintaining 76% accuracy.
- Engineered an **optical mark recognition** application leveraging OpenCV, achieving a 98% accuracy rate by optimizing image processing algorithms.
- Developed an API layer for the built systems to integrate with rest of product using FastAPI, Python.

EDUCATION

Bachelors in Technology

Mahindra University • Hyderabad, India • 2019