Ayush Rathore

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Software engineer with 4+ YoE owning E2E full-stack, GenAI, and infrastructure products.

TECHNICAL SKILLS

Specialisations: Full Stack, GenAI, Backend, Frontend, DevOps, Data Engineering.
Languages: Python, TypeScript, JavaScript, SQL, C++, C, Go, HTML, CSS, Bash.
Frameworks: FastAPI/Django/Flask, Node.js/Express.js, AWS/GCP, Next.js, React, React Native, Git, GitHub, Docker.

EXPERIENCE

Adaline - Founding Generalist Engineer TypeScript, React, GCP, Firestore — Remote - Washington, USA | Jan 2025 - Present

- Scaled telemetry ingestion to **10K RPM** with PostgreSQL, ClickHouse, and Firestore, using batching, idempotent writes, atomic aggregation, caching, and lazy span hydration, achieving **p99 under 3 seconds** with **zero data loss**, validated with a k6-based reconciliation harness.
- Drove core components of a **10-stage** agent self-improvement pipeline, mining intents from production traces to produce auto-generated evaluators at scale, and built its quality validation framework utilising **3+ SOTA benchmarks**, including τ^2, τ^3, and SWE-bench.
- Expanded the LLM Gateway SDK, to **300+ models** across **10+ providers**, supporting streaming, embeddings, MCP, and tool calls with a standardised format, underpinning the Platform and Proxy, while reaching **600+ GitHub stars** and **300K+ downloads/month**.
- Deployed isolated GCP infra using Pulumi and CI/CD, with env-aware IaC configuration, public Gateway routing, automated deployment and teardown, designing a lower-cost shared staging and dev environment and optimising cost for prod, reducing costs by **60%**.
- Carried out development of the developer ecosystem supporting end-to-end self-improving agent development and evaluation across macOS, Linux, and Windows, including CLI/SDK releases, **10+ integrations**, **5+ cookbooks**, **2+ skills**, and support for **10+ MCPs**.
- Fabricated a hosted LLM Gateway Proxy at **1K RPM**, supporting completion and streaming chat, embeddings, authentication, provider-specific transformations, tool calls, trace/span capture, error handling, and cost calculation across **9+ providers**.
- Built drag-and-drop **Agent** workflows linking prompts, APIs, datasets, and evaluations through prompt DAGs, and led the V1-to-V2 platform migration, dynamic dataset columns, and synchronised editing across core schemas.
- Shipped an onboarding system with a gamified, quest-based learning flow modelled as a multi-edge directed graph with dynamically branching completion paths of **30+ tasks**, featured on Mobbin, driving a **2×** increase in signups and improving long-term retention by **132%**.

Limited - Founding Software Engineer Python, React Native, Next.js, AWS — Remote - California, USA | Nov 2023 - Dec 2024

- Architected **5+ end-to-end AI projects** from scratch, building advanced **Retrieval-Augmented Generation (RAG)-based** chatbots, a **voice-testing LLM agent**, and solutions utilising GPT, Anthropic, and Vertex AI.
- Deployed a **rate limiter** with **Redis** using the token bucket algorithm, reducing outgoing requests hitting limits on external APIs by **99.99%**, ensuring organised fault tolerance for external services.
- Introduced async worker queues using **SQS** and **Celery** with task progress tracking to offload 10+ long-running workflows (scraping, embeddings, Linear/Slack/GitHub integrations, routine tasks), leveraging concurrency to cut processing time from **60s to under 5s**.
- Established custom heuristics with **data analysis, data cleaning**, and an **engineered prompt pipeline**, building an evolvable framework with changing data, resulting in **95% accuracy** in classifying and extracting relevant images and details from emails.
- Planned a custom algorithm with **HDBSCAN** using embeddings and cosine similarity to cluster sentences in **real time**, achieving **95% precision** and enhancing content analysis for the dashboard.

Zenskar - Founding Backend Engineer Python, FastAPI, PostgreSQL, Terraform — Remote - New York, USA | May 2023 - Oct 2023

- Orchestrated the implementation of centralised logging using **OpenTelemetry** and **SigNoz**, encompassing **10+ services** across EC2 servers, scripts, microservices, and AWS Lambda functions for enhanced monitoring and traceability.
- Scaled the backend with **API versioning**, incorporating features of resource-based access control, intricate **filters** and ordering with optimised SQL queries across **50+ endpoints**, ensuring **scalability** and backward compatibility.
- Integrated **Salesforce** and **Zoho**, building the full stack with CI-automated testing, utilising Celery, APIs, webhooks, and Apex triggers for **two-way synchronisation** across **7+ objects**.

Google SoC - Open-Source Developer Python, Django, Angular, Docker — Remote - Atlanta, USA | Apr 2023 - Aug 2023

- Spearheaded the Evaluation Infrastructure Optimisation Project, implementing auto-scaling EC2 workers and auto-cancel mechanisms, reducing **AWS infrastructure running costs by over 50%**, and bolstering code integrity with comprehensive tests, raising coverage to **85%**.

Freelance - Software Engineer Python, Remix, AWS — Remote - Belgium, Europe | Jan 2022 - Mar 2023

- Delivered **7+ production systems**, including a backend architecture migration from serverless to server-based, a fully functional local multi-tenant AWS SaaS, data engineering ETL pipelines for collaboration, CRM & ticketing software, and testing-environment mocks.

PROJECTS

Gateway - Production-grade LLM SDK across 10 providers.(600+ Starts, 300K+ downloads/month) — Work |
EngManager - AI agent for engineering teams integrating Linear and GitHub. — Work |
AR_Beast - Open-source Linux kernel and driver project with an Android app (9,500+ users, 30,000+ downloads). — Open Source |

EDUCATION

Computer Science and Engineering - B.Tech. — RGIPT (an institute at par with **IITs**) | Dec 2020 - May 2024

Achievements: Grade: 8.57 (Top **10**% Scholar); 3+ **international hackathon wins**; Ranked in the top **1.84% in IIT-JEE**; **2× ICPC** regionalist