Aasthik Upadhyay

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Profile

Software Engineer with hands-on experience shipping production features, building REST APIs, and developing cloud-based and AI-powered systems. Experienced in React, TypeScript/JavaScript, Python, AWS, and Git-based workflows, with a focus on end-to-end ownership, reliable backend services, and solving ambiguous engineering problems.

Education

UPES, Dehradun Aug. 2023 – May 2027
Bachelor of Technology in Computer Science (AI/ML), CGPA: 9.46/10
CBSE Board: Class 12 - 92% | Class 10 - 98%

Experience

Software Engineer Intern June 2026 – Sep. 2026
Usenseon Labs *Remote*

- Owned end-to-end delivery of production features for a healthcare platform **spanning ESP32 devices, AWS backend services, and a mobile application**; took features from implementation and testing through deployment and post-release iteration.
- Worked directly with the founder and real users to turn ambiguous requirements into **10+** shipped features; rapidly prototyped alternatives, validated behavior, and iterated on production feedback without a formal specification.
- Debugged cross-layer issues across embedded hardware, APIs, cloud services, and mobile clients, improving end-to-end reliability and reducing observed data-processing latency by approximately **30-35%**.

Full Stack Developer Intern Apr. 2026 – Jul. 2026
Naiyo24 Pvt. Ltd. *Remote*

- Designed and implemented REST APIs, authentication, and **file-transfer workflows** across Python, Flutter, Swift and PostgreSQL, shipping backend changes across a multi-service codebase.
- Led engineering delivery for a 5-member team, driving sprint planning and code reviews while **consolidating 5+ repositories** into a monorepo, reducing integration overhead by 20% and accelerating feature delivery.

Selected Projects

ctrlz | *Go, Cobra, fsnotify, Git, Concurrency* | GitHub Aug. 2026

- Built a **Go CLI for filesystem snapshotting and recovery** using an external bare Git repository as a content-addressed store, designed to preserve recoverability even after catastrophic local failure.
- Implemented **atomic revert operations using Git tree resets** and cleanup, plus a ticker-based watcher and concurrent-process locking to prevent inconsistent state under overlapping filesystem events.
- Validated recovery behavior across **80+** snapshot/restore scenarios and reduced recovery to a deterministic, scriptable workflow suitable for developer environments.

Anamnesis | *Python, Cognee, Ollama, GitPython, SQLite, Git, LLMs* | GitHub Jul. 2026

- Built an **open-source, local-first AI developer agent** that ingests Git history, code changes, architectural decisions, and debugging knowledge into persistent graph-based memory, preserving engineering context across sessions.
- Designed automated memory consolidation to cluster related debugging sessions, reuse prior engineering knowledge, and prune stale context as repositories evolve; reduced repeated-context overhead across **30+** development sessions.
- Implemented a Git pre-commit hook with **sub-second retrieval** that surfaces context-aware warnings locally using Ollama, avoiding per-query API cost and external network dependency.

CareerPath AI | *Python, TypeScript, Amazon Bedrock, AWS Lambda, API Gateway, S3, RAG* | GitHub Dec. 2025 – Jan. 2026

- Built a **React-based frontend** to provide an interactive, user-friendly career mentoring experience, enabling users to upload resumes, specify goals, and receive personalized learning roadmaps with explainable AI recommendations and source-backed insights.
- Built an **Agentic RAG system on Amazon Bedrock** with multi-step task planning, tool invocation, and retrieval-augmented reasoning, producing explainable outputs with source citations.
- Designed a **serverless backend with AWS Lambda, API Gateway, and S3**, exposing typed REST endpoints and decoupling compute from storage for a maintainable, horizontally scalable architecture.
- Evaluated the workflow on **50+** representative queries and iterated on retrieval/tool orchestration, tracking response quality, failure cases, latency, and per-query model cost.

Technical Skills

Languages: TypeScript, JavaScript, Python, SQL, Go, Java
Frontend: React.js, Next.js **Backend & APIs**: Node.js, FastAPI, Flask, REST APIs
Cloud & DevOps: AWS (Lambda, API Gateway, S3, Bedrock), Docker, GitHub Actions, Linux
Databases: PostgreSQL, MySQL, MongoDB, SQLite
AI Engineering: Agentic AI, RAG, LLM APIs, Amazon Bedrock, Ollama, PyTorch, Transformers

Certifications

- **Oracle Agentic AI Certified Foundations Associate** – Oracle University (Jul. 2026)
- **Introduction to Agentic AI on AWS** – AWS Training & Certification (Jan. 2026)
- **Introduction to Retrieval-Augmented Generation (RAG)** – IBM SkillsBuild (Jan. 2026)

Achievements & Leadership

- **State Winner, Udbhav Hackathon 2025:** Secured 1st Prize at the State Foundation Silver Jubilee Innovation Challenge organized by the Technical Education Department, Government of Uttarakhand; felicitated at Raj Bhavan.
- **National Finalist, HackVeda 2026:** Shortlisted among 300+ participating teams in an IBM & AWS-sponsored hackathon.
- **LeetCode:** Solved 600+ problems with a contest rating of 1657 (Top 20% globally across 13 contests).
- **Joint Secretary, Computer Society of India (CSI), UPES:** Organized technical workshops and hackathons for 200+ students.