

# ANKIT PATNAIK

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## Experience

### Atlan

Software Engineer - I

Remote

June 2025 – Present

- Resolved a critical deadlock in Atlan's **Python SDK** caused by HTTP connection pool exhaustion, **cutting request latency from 600s to ~90ms**(99%+ reduction).
- Revamped Atlan's lineage engine into a reusable **graph traversal framework** supporting **multi-level dependency analysis**, enabling deep upstream/downstream lineage exploration and impact tracing across interconnected assets.
- Developed a **sandboxed AI agent execution framework** for isolated **code execution**, **Kubernetes operations**, **debugging**, and **automated PR workflows** in secure ephemeral environments.
- Enabled **real-time asset state propagation** across distributed platform services using **Kafka** and **Numaflow**-based event pipelines for low-latency synchronization.
- Mitigated downstream service failures, improving **automation workflow success rate to 98%**.
- Built an **LLM-powered troubleshooting assistant** for diagnosing **system and configuration failures**, reducing **manual debugging effort** and accelerating issue resolution by **2 days**.

### Atlan

Software Engineer - I Intern

Remote

December 2024 – June 2025

- Implemented **Argo-to-Temporal migration plugins** for reliable workflow translation, enabling more resilient orchestration through **durable execution and native retry semantics**.
- Diagnosed and resolved a production issue causing a **10M+ asset metadata workflow** to repeatedly fail, implementing checkpoint-based recovery and eliminating a self-reinforcing processing loop.
- Integrated **HashiCorp Vault** for secure SMTP credential management, eliminating plaintext secret exposure and restoring a previously broken onboarding workflow.
- Enriched **audit logs** with product metadata, reducing manual context gathering and accelerating **RCA by 30%**.

## Technical Skills

**Languages:** C++, Python, JavaScript, TypeScript, Go, Java

**Technologies:** React, Node.js, Express, Django, Gin, Spring Boot, NGINX, RabbitMQ, Kafka

**Platform Tools:** AWS (EC2, S3, IAM, VPC), Docker, Kubernetes, Argo Workflows, Temporal, Grafana

**Databases & Analytics:** Elasticsearch, Cassandra, PostgreSQL, Redis, MongoDB, ClickHouse, Apache Iceberg

**Core Expertise:** Distributed Systems, Event-Driven Architecture, Workflow Orchestration, AI Agents

## Projects

**Code-Cloud** | *Tailwind, Typescript, Go, Gin, Docker, WebSockets*

[Source Code](#)

- Developed a browser-based IDE with live server support, enabling **one-click environment setup** in under 1 minute.
- Designed **isolated Docker environments** for reproducible execution, eliminating configuration issues during testing.
- Enabled **zero-infrastructure deployment** with no server storage, no accounts, and fully in-browser execution.

**LiteShare** | *React, Typescript, Node.js, Next.js, Socket.io, WebRTC*

[Source Code](#) | [Live](#)

- Built a peer-to-peer platform for secure file sharing and real-time chat using WebRTC and Socket.io.
- Eliminated third-party storage**, enabling direct peer-to-peer transfers with **0 intermediary persistence**.
- Optimized** transfers with **Socket.io and WebRTC**, achieving 30% faster throughput than API-based methods.

**Lockr** | *Python, SQLite*

[Source Code](#)

- Engineered a **secure credential management system** using Python and SQLite, implementing **3-layer security** with Fernet encryption, PBKDF2 key derivation, and bcrypt hashing to eliminate plaintext secret storage.
- Designed an **offline-first credential manager** with **0 cloud dependencies**, minimizing attack surface.

## Achievements

- Engineered **Penny**, an AI finance leak detection agent for duplicate payments, 3-way match failures, and COGS leakage; deployed it on Claude Managed Agents and secured **3rd Place** at Atlan's Internal Hackathon 2026.
- Solved **1,300+** algorithmic problems on [Codeforces](#), [LeetCode](#), and [CodeChef](#), earning **Specialist** (CF), **Knight** (LC), and **3 star** (CC).
- Secured **AIR 1958** in **CodeKaze'23**, ranking in the top **2%** among **100,000+** participants.

## Education

National Institute of Technology Agartala

December 2021 - June 2025

Bachelor of Technology in Electrical Engineering

8.63/10 CGPA