ADITYA UPADHYAY

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OBJECTIVE

Self-driven software developer with 4 years of experience in building scalable and distributed systems, currently specializing in distributed firewall and network security. Passionate about designing reliable systems and solving complex technical problems.

EDUCATION

Master of Computer Science, Georgia Tech, Atlanta

Aug 2023 – May 2025 (Expected)

GPA: 3.6/4.0

Relevant Coursework: Graduate OS, Advanced OS, Game AI, Machine Learning for Trading, Distributed Systems, Information Security

Bachelor of Computer Science, BITS Pilani, Pilani Campus

2017 - 2021

GPA: 8.17/10

Relevant Coursework: Cloud Computing, Graduate Algorithms, Computer Networks, Operating Systems, Compiler Construction

SKILLS

Languages Python, Golang, C++, Java, C#

Frameworks Kubernetes, Docker, Hadoop, Kafka, Spark

Cloud/Tools AWS, SQL, DynamoDB, REST APIs, Git, Grafana

Specialties System Design, Distributed Systems, eBPF, Iptables, OVS

EXPERIENCE

Senior Engineer Eightfold.ai (Data Platform), Bengaluru, KA

Feb 2025 - Present

- Developed a CSV ingestion and recurring ingestion framework used by the team to onboard customer data efficiently.
- Took ownership of the Oracle Recruiting Cloud adapter for the Eightfold datapath, ensuring reliability and issue resolution.

Member of Technical Staff

July 2021 – Feb 2025

Nutanix (Flow Network Security), Bengaluru, KA

- Built an entity synchronization framework to replicate security policies across availability zones via RPCs, ensuring consistency and avoiding duplicate updates.
- Scaled the visualization backend to serve 1M+ data points through WebSockets, achieving a 10x performance boost and optimized memory usage by tuning cgroup limits.
- Refactored critical rule programming modules to reduce on-call incidents and implemented on-call automation tools to further lower operational overhead.
- Created a proof-of-concept extending Flow Network Security to support VMs on any cloud architecture using iptables, replicating all key features including rule programming and visualization.
- Developed a prototype using eBPF to block VMs exhibiting unusual traffic patterns, improving security detection.

Software Development Intern

Jan 2021 – June 2021

Amazon (EU Automotive), Bengaluru, KA

- Migrated and optimized the search service, improving performance and reliability, and fixed automation tests in the build pipeline.
- Designed a pipeline leveraging S3 and AWS Lambda for automated data processing to support ML models.

PROJECTS

MapReduce Framework – Built a MapReduce framework inspired by Google's OSDI'04 paper, supporting user-defined map/reduce functions, worker failure recovery, and duplicate task handling.

Distributed File System – Implemented a distributed file server using sync gRPC for file operations and async gRPC for directory listing updates, with client-side caching and invalidation.

Distributed Database (DynamoDB-inspired) – Created a distributed database featuring leaderless replication, read-repair mechanisms, and automatic partition rebalancing.