

# ADITYA UPADHYAY

9079891399 ◇ Bengaluru, KA

[f20170083p@alumni.bits-pilani.ac.in](mailto:f20170083p@alumni.bits-pilani.ac.in) ◇ [LeetCode](#) ◇ [Website](#)

## OBJECTIVE

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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

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**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

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<b>Languages</b>	Python, Golang, C++, Java, C#
<b>Frameworks</b>	Kubernetes, Docker, Hadoop, Kafka, Spark
<b>Cloud/Tools</b>	AWS, SQL, DynamoDB, REST APIs, Git, Grafana
<b>Specialties</b>	System Design, Distributed Systems, eBPF, Iptables, OVS

## EXPERIENCE

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**Senior Engineer** Feb 2025 – Present  
Eightfold.ai (Data Platform), Bengaluru, KA

- 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

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**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.