

Avinash Swaminathan

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EDUCATION

Georgia Institute of Technology

Masters degree in Computer Science with specialization in Computing Systems

Atlanta, GA
Aug '22 - May '24(Expected)

Netaji Subhash Institute of Technology

Bachelor of Engineering in Information Technology (GPA: 9.15/10)

New Delhi, India
Aug '17 - May '21

SKILLS

- **Languages:** Python, C/C++ , Java, SQL
- **Frameworks/Tools:** Springboot, Spring, Pytorch, Git, AWS, Gradle, Maven, Looker, Docker, JIRA, Hibernate
- **Databases:** MySQL, Postgres, DynamoDB, Amazon RDS
- **Courses:** Data Structure & Algorithms, Database Management, Computer Networks, Software Engineering, Neural Networks

EXPERIENCE

Atlassian

Software Development Engineer

Bengaluru, India
July '21 - July '22

- Led effort to build low-latency, highly reliable(4 9s SLA) pipeline to event source and bootstrap CMDB data from *Insight* to *Atlassian Data Lake* via *Kamino* for **10k+ customers**
- Designed and built observability and alerting infrastructure for data replication pipeline using *Splunk*, *SignalFx*, *Opsgenie* and *pollinator* which helped in **reducing MTTA/MTTR by 60%**
- Managed transition of reporting microservices to use *SLAuth/POCO security mechanism* for all ingress/egress requests leading to services achieving **security score = 80%** in Atlassian's internal security scorecard
- Achieved **30% reduction in support tickets** by developing reporting-retry API to reprocess failed reports and deploying *periodic lambda* to clean up stale entries from RDS
- **Triaged around 30+ customer tickets** and ensured customer resolution within **minimum SLA time = 16 hrs**

Microsoft IDC

Software Engineering Intern

Hyderabad, India
May '20 - Jul '20

- Developed migration xml script to add schema changes to *newUsersChange* and *oldUsersChange* views
- Wrote unit and e2e tests with **100% coverage** to test schema changes using C# testing suite(NUnit)
- Analyzed backfill of production data into new columns in *Cosmos DB* and recommended rollout changes

Center for Advanced Information Technology Field Studies, NSIT

Research Associate

New Delhi, India
Jan '19 - Jul '21

- Proposed a GNN-based online routing policy to optimize *QoS parameters* for *Software-Defined Networks*
- Built a reinforcement-learning based cybersecurity policy framework to preclude malicious attacks for Software-Defined Networks. Policy showed **50% efficacy over baseline** and restored system to safe state in least time

PROJECT

IT Service Desk Application

Feb '22 - May '22

Tech Stack: SpringBoot, Thymeleaf, Spring-security, Postgres, Maven, Hibernate

- Created a *Spring-boot* app to help customers create requests and service agents to respond/triage these requests
- Integrated User Management tool to manage customers, users and agents
- Implemented security mechanism using *Jwt* and *spring-security* to restrict access to users based on their role
- Added comment section to assist virtual communication between responder and user during request lifecycle

Movieflix: Movie Recommendation System

Feb '20 - May '20

Tech Stack: Flask, Heroku, MongoDB

- Deployed a *Flask-based web application* to *Heroku* using *Docker* that **recommends movies** to the user
- Implemented *item-item*, *user-user collaborative filtering* and *rank-matrix factorization* algorithm in *Flask* backend to provide movies recommendations based on preset ratings stored in *MongoDB-cloud* database.

PUBLICATIONS

Avinash Swaminathan , Mridul Chaba , Deepak Kumar Sharma , and Uttam Ghosh . **GraphNET : Graph Neural Networks for routing optimization in Software Defined Networks.** Computer Communications ,178:169–182 , 2021. [Paper]

AWARDS AND SCHOLARSHIPS

- Awarded NSIT Merit Scholarship(top 5%) for 2 consecutive years
- Grand finalist at Smart-India-Hackathon 2019
- Awarded AAAI student scholarship to attend AAAI 2020, NYC
- Selected and sponsored to attend Google AI summer school for NLP track
- Secured first position in New Grad ITSM Hackathon organized for new joiners by Atlassian ITops org