

## ATUL NATH

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## EDUCATION

### UNIVERSITY OF SOUTHERN CALIFORNIA

Los Angeles, CA

#### Master of Science, Computer Science | GPA: 4.0/4.0

Aug 2023 – May 2025

- Graduate Teaching Assistant: Design and Construction of Large Software Systems
- Relevant Coursework: Analysis of Algorithms, Distributed Systems, Database Systems, Artificial Intelligence

### VELLORE INSTITUTE OF TECHNOLOGY

Vellore, IN

#### Bachelor of Technology, Computer Science and Engineering | GPA: 9.26/10

Jul 2017 – Jun 2021

- Relevant Coursework: Algorithms, Software Engineering, Operating Systems, Database, Applied Linear Algebra

## SKILLS

Programming Languages: Go/Go Lang, Java, Python, C#, GraphQL, HTML, CSS, JavaScript, Node.js, C++

Databases: SQL Server, Elasticsearch, Druid, MongoDB, PostgreSQL, CockroachDB

Frameworks and Tools: Docker, Kubernetes, Kafka, Redis, Prometheus, Grafana, ELK Stack, AWS S3, Bash, Flask, Git, Postman, Jenkins, CI/CD, RESTful APIs, Microservices, Linux, Windows Server, gRPC, JSON, Powershell

Soft Skills: Agile/Scrum, Leadership, Teamwork, Public Speaking

## WORK EXPERIENCE

### BOSE CORPORATION

Framingham, MA

#### Cloud Software Engineer Intern

Jun 2024 – Aug 2024

- Created and containerized a Flask-based Alert Reader tool to automate the reporting of Prometheus metrics scraped from Slack channels, integrating Grafana and Kibana links, and cutting down alert reporting time by 50% for on-call responders
- Optimized Cron Jobs for nightly backup and restore operations from CockroachDB to S3, decreasing disk capacity usage from 50 GB to 100 MB

### HEWLETT-PACKARD ENTERPRISE

Bangalore, IN

#### Cloud Developer I

Aug 2021 – Jun 2023

- Designed, developed, and maintained REST APIs in Go to manage NFS shares for HPE's GreenLake Cloud Platform
- Implemented 4 Microservices to handle asynchronous device communication, enhancing scalability of framework
- Devised a Delta Protocol with LRU-Cache to optimize data transmission, reducing API response time from 5 minutes to less than 1 minute
- Mentored 2 junior developers in the File-as-a-service team for Greenlake, by delivering insightful KT sessions, guiding architectural understanding, feature comprehension, codebase navigation, and issue debugging techniques

### HEWLETT-PACKARD ENTERPRISE

Bangalore, IN

#### Software Engineer Intern

Feb 2021 – Jul 2021

- Developed multiple REST APIs using Powershell and C#, enabling file-share CRUD operations on Windows Guest VM
- Devised automation techniques for 8-10 Windows Active Directory features, streamlining the overall development process
- Wrote N-Unit test cases in C# for CLI and Rest endpoints, improving code coverage by 50% for File Manageability Layer

### AKSCCELLENCE INFO SOLUTIONS LTD

Gurgaon, IN

#### Software Engineer Intern

Jun 2019 – Jul 2019

- Enhanced user experience of Akscellence's website, adding drop-down features and improving site navigation
- Built 2 Microsoft Power BI dashboards, rendering interactive insights for business data

## ACADEMIC PROJECTS

### Raft Consensus Protocol Implementation | C++, gRPC

Sep 2024 – Nov 2024

- Implemented RAFT protocol with leader election, and fault-tolerant log replication, ensuring system reliability in distributed systems.
- Designed gRPC communication to handle AppendEntries and RequestVote RPC handlers, while maintaining system consistency even in the presence of network partitions or node failures.

### Stock Trade Application | React JS, Node JS, MongoDB, GCP

Jan 2024 – Apr 2024

- Built a responsive stock trading application to buy/sell stocks and visualize insights of NASDAQ and NYSE stock tickers
- Managed a MongoDB Atlas datastore for stock watchlists and portfolio data, hosted on Google Cloud Platform (GCP).