ATUL NATH

Los Angeles, CA | nath.atul1@gmail.com | (747) 306-3596 | linkedin.com/in/atul-nath-61356a163/ | github.com/nath9777

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
Software Engineer 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

AKSCELLENCE 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**).