

Sabarish Muthumani

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Professional Summary

- I'm a hands-on engineer with over 4 years of experience working in high-scale environments, including systems processing over **10 million+** requests per day, across top-tier organizations like Cisco, NPCI, and Virginia Tech.
- I'm deeply skilled in Node.js, Docker, Kubernetes, Java Spring Boot, and cloud platforms like AWS and Azure, building everything from scalable REST APIs to infrastructure for real-time AI and 5G research.
- My experience spans across production-grade CI/CD pipelines using GitLab CI, Jenkins, SonarQube, Selenium, and Zabbix, with strong focus on observability and reliability via ELK Stack, Prometheus, and Grafana.
- I bring solid academic foundations in Operating Systems, Computer Networks, Virtual Memory, Computer Architecture, Multiprocessor Scheduling, and Software Development Lifecycles.
- I have also worked closely with GPU computing, KVM virtualization, blockchain (Hyperledger Fabric), and secure identity systems with LDAP and 2FA.

Education

Virginia Polytechnic Institute and State University

Master of Science in Computer Engineering, GPA: 3.8/4

Aug. 2023 – May 2025

Blacksburg, USA

Amrita School of Engineering

Bachelor of Technology in Computer Science and Engineering, 7.7/10

Aug. 2016 – May 2020

Coimbatore, India

Work Experience

Virginia Tech

Network Engineer

May 2025 - Present

Blacksburg, Virginia

- Developed a monitoring solution using Zabbix and PostgreSQL, and managed logs with ELK Stack.
- Installed OS with ZFS and GRUB, ensuring reliable boot for RAIDZ1 pool, with fault tolerance for single disk failure.
- Set up DELL EMC and Synology PCIe storage solution, to enhance r/w performance for data management.
- Configured NVIDIA GPUs for deep learning/AI research, accelerating model training and KVM virtualization.
- Managed authentication using Ansible, integrated LDAP with 2FA for secure access within the college.
- Configured Cisco switches, enabled firewall on servers, and optimized file systems to meet specific requirements.
- Created virtualization clusters for 5G research, installing radios and setting up KVM for seamless integration.
- Enabled a real-time streaming platform using Kafka on AWS with EC2, S3, and Docker for student data processing.

Mouri Tech

AI Analyst Intern

May - July 2024

Irving, Texas

- Reduced hiring time by 40% by developing an AI screening platform by developing a chat-bot and AI screening platform using Azure AI, OpenAI, Document Intelligence and GraphQL for a RAG application.

Cisco Systems, Inc. (1.8 years)

Software Engineer

April 2022 - August 2023

Bangalore, India

- Deployed scalable SaaS platforms by developing async REST APIs using Java Spring Boot, on Kubernetes.
- Resolved XSS vulnerabilities, Kafka lags, Camunda workflows, and Angular updates, improving performance by 30%.
- Built a scalable migration workflow in Node.js for 1000+ customers, reducing cutover time by 75% and minimizing down-time.

National Payments Corporation of India (NPCI) (1.3 years)

Senior Associate Developer

May 2020 - March 2022

Hyderabad, India

- Automated onboarding of 150+ banks to a Hyperledger-based platform using Bash, reducing setup errors by 80%.
- Implemented 3 ACK Verification Logic in Node.js, using RabbitMQ and Redis increasing success rate to 90%.
- Improved production deployments using CI/CD pipelines via GitLab CI and Jenkins, reducing rollback time by 75%.
- Boosted token generation/issuance through batch processing in Hyperledger Fabric using Golang, by 150%.
- Provisioned ElastAlert and Kibana dashboards for monitoring using ELK stack, reducing manual monitoring.
- Set up OS and Kubernetes clusters for prod, staging, test, and dev environments to streamline SDLC and testing.

Projects

- Custom Work Stealing Algorithm | [Repo](#) | Java, Multiprocessor, Threads, ForkJoin Pool, Java
- Wildfire detection using OpenCV | [Repo](#) | OpenCV, Image processing, CNN, computer Vision

March 2024

December 2023

Technical Skills

Languages: C, C++, Java, JavaScript, TypeScript, Python, Go, Bash, SQL/NoSQL

Frameworks/Tools: Node.js, Spring Boot, Angular, React.js, REST APIs, Docker, Kubernetes, GitHub

Cloud/DevOps: AWS, Azure AI, GitLab CI, Jenkins, SonarQube, Zabbix, ELK Stack, Prometheus, Ansible

Database/Infra: PostgreSQL, MySQL, MongoDB, Redis, RabbitMQ, Linux/Unix, KVM, Hyperledger Fabric