

Abhishek Chigurupati

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📍: New York, USA

PROFILE SUMMARY

Experienced Software Engineer with 3 years at Apple, focusing on designing and deploying scalable web and cloud solutions. Adept at enhancing system performance and infrastructure efficiency through modern technologies and CI/CD. Proficient in full-stack web, software development, deployments, and modern software engineering practices.

EDUCATION

- New York University, Courant Institute of Mathematical Sciences** New York, USA
• *Master of Science in Computer Science; GPA: 4.0* Sept 2024 - May 2026
Courses: Advanced DS and Algorithms, Cloud Computing, Programming Languages, Operating Systems, Distributed Systems
- PES University** Bengaluru, India
• *BTech in Computer Science and Engineering; GPA: 8.74* Aug 2017 - May 2021
Courses: Machine Learning, Artificial Intelligence, Big Data, Compiler Design, Computer System Architecture, Computer Organization

SKILLS SUMMARY

- **Languages:** Go, Python, C/C++, R, Javascript, SQL, HTML5, Bash, Lex, yacc
- **Frameworks:** Django, React, Flask, NodeJS, TensorFlow, PyTorch, NumPy, Pandas, OpenCV, Matplotlib
- **Tools:** AWS, Docker, Linux/Unix, Git, MySQL, PostgreSQL, Redis, EC2, EKS, Kubernetes, Jenkins
- **Certifications:** Juniper Network Certified Associate - (JNCIA JUNOS), Terraform : Automate provisioning of AWS EC2 Instances, Amazon EKS for Developers, Migrating to AWS

EXPERIENCE

- Apple Inc.** Hyderabad, India
• *Software Engineer (Full-time)* Jul 2021 - Aug 2024
 - **Platform Development for Control Plane Monitoring:** Developed a **full-stack web platform** with a **sunburst** alert view using **ancestral mapping** for node hierarchies and integrated Grafana dashboards for real-time metrics, using **React**, **Django**, and **Redis**. Enhanced Apple's control plane infrastructure efficiency by 75%.
 - **Slack-Based Diagnostics Microservice:** Developed a **microservice** in Golang integrated with Slack for Apple's cloud infrastructure, enabling users to trigger API calls through button actions. This streamlined access to **diagnostic data**, reducing manual effort and response times, and improving overall operational efficiency by 33%.
 - **Telemetry Dashboard for Apple Cloud Infrastructure:** Built a **full-stack web application** using **React**, **Node.js** and **Mongo** for Apple's Cloud SRE teams, providing real-time insights on change requests (CRs), high-priority incidents, and traffic analysis. Integrated alert management, improving operational efficiency by 40%.
 - **Orchestrated CLI Tool for Automated Change Requests and Tickets:** Built an CLI tool for Apple's Backbone, automating CR and ticket workflows, reducing processing time from 8-10 mins to 2 mins per CR.
 - **Scalable Kubernetes Deployment and Load Optimization:** Architected a Kubernetes deployment with modular pods and containers, using **GSLB** for load distribution, which improved performance for over 8000 Apple Cloud users.
 - **CI/CD Automation for Docker and Kubernetes Deployment:** Engineered **CI/CD** pipelines using jenkins for automated Docker image creation, Artifactory publication, and Kubernetes deployment, reducing deployment time by 30% and minimizing manual errors.
 - **Expertise in Apple Backbone L1 Architecture and Routing:** Resolved routing issues and managed various circuit types within Apple's Backbone L1 architecture, configuring Juniper MX2020 routers and **routing policies**, and utilizing expertise in Arista and Cisco hardware to enhance network reliability
 - **Memory Leak Resolution and Hardware Performance Enhancement:** Resolved memory leaks on Juniper devices through strategic reloads, addressed log filtering issues, and managed air filter swaps and FPC failures, resulting in a 25% improvement in hardware performance.
- Aruba Networks, HPE** Bengaluru, India
• *Software Engineer (Intern)* Jan 2021 - May 2021
 - **Static PortFilter Implementation in Aruba OVA:** Implemented Static PortFilter in an Aruba OVA environment, enhancing network security by controlling inbound and outbound traffic, strengthening infrastructure.

PROJECTS

- **Automated traffic light control and violation detection system:** Developed an automated traffic light system using CCTV footage analysis, SVM for object prediction, ARIMA for signal timing, and **YOLOv3** for violation detection. Integrated **EasyOCR** for license plate recognition. **Tech:** OpenCV, Python, YOLOv3 (**May '21**)
- **Mini JAVA Compiler:** Led a project from **lexical** analysis to assembly code generation, implementing key constructs (loops, conditionals), symbol tables, error handling, and syntax tree generation. Converted Java code to **MIPS** assembly code. **Tech:** Lex, yacc, C, Java . (**Dec '19**)

ACHIEVEMENTS AND LEADERSHIP

- **Fast-Track Promotion:** Pitched, developed, and deployed an innovative solution that gained traction from senior management. Recognized for exceptional performance and awarded a rare promotion at 21 yrs old in my first year at Apple.