Gagan Deep Gopalaiah

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EDUCATION

University of California, San Diego — La Jolla, CA
Master of Science in Computer Science, GPA 4.0/4.0 — *Sept 2022 - Mar 2024 (Expected)*

Rashtreeya Vidyalaya College of Engineering — Bangalore, India
Bachelor of Engineering in Computer Science, GPA - 9.13/10.0 — *Aug 2015 – May 2019*

TECHNICAL SKILLS

Languages: Python, Golang, JavaScript, TypeScript, Java, C/C++, SQL, HTML, CSS
Developer Tools: Git, AWS, Azure, Docker, CircleCI, Terraform, Kubernetes, NodeJS, NextJS
Databases and Frameworks: MySQL, PostgreSQL, DynamoDB, Elasticsearch, MongoDB; SpringBoot, FastAPI, gRPC

RESEARCH EXPERIENCE

Graduate Research Assistant — Apr 2023 – Present
Systems and Networking Group, UC San Diego — *La Jolla, CA*
- Contributed significantly to the development of the Greengrader platform, which focused on scheduling autograder containers with a strong emphasis on data-center carbon efficiency. Played a pivotal role in all phases, including design, implementation, and deployment, ensuring the success of the project.
- Tech Stack - Python, Bash Scripting, Docker, Kubernetes, PostgreSQL, MQTT, React

PROFESSIONAL EXPERIENCE

Software Engineer - II — May 2021 – Jul 2022
Cisco Systems Inc. — *Bangalore, India*
- Worked on building an authentication and authorization framework for Cisco CX Cloud which was used by multiple downstream teams impacting over a 100 customers. Integrated this framework with Okta to implement RBAC (Role-Based-Access-Control) and secure CX Cloud APIs with OAuth2.0 industry standard.
- Owned and designed backend services related to internal roles and resources. Developed RESTful Golang API endpoints as part of these services before hosting them on AWS. Drove technical discussions across different teams for cross-functional features leading to faster and coherent requirement specifications.
- Tech Stack - Golang, Okta, OPA, Docker, AWS - DynamoDB, S3, SQS, Lambda, ECS, ECR

Software Engineer — Jul 2019 – Apr 2021
Cisco Systems Inc. — *Bangalore, India*
- Implemented new features and enhancements following Agile methodologies in Optimal Software Version Recommendation (OSVR) and the Business Critical Services (BCS) teams.
- Played a crucial role in maintaining the security of the codebase by serving as the point-of-contact for the Cisco Secure Development Lifecycle (CSDL). As a result, the codebase had zero critical vulnerabilities. I also ensured GDPR compliance for European CX Cloud customers.
- Tech Stack - Python, Java, AWS, FastAPI, Elasticsearch, Docker, CircleCI

ENGINEERING PROJECTS

TCP Chat Server – GitHub
- Developed a highly performant, multithreaded TCP chat server that allows multiple clients to connect and communicate with one another through the use of chat rooms. Utilized the Go programming language and concurrent programming techniques including goroutines.

HTTP Server
- Designed and implemented a high-performance HTTP server in Go, adhering to a subset of the RFC 9110 specification. Supported concurrent client connections, pipelining, virtual hosting and persistent connections to handle large amounts of incoming traffic efficiently.

LEADERSHIP AND TEACHING EXPERIENCE

Graduate Teaching Assistant — Sep 2022 – Present
University of California, San Diego — *La Jolla, CA*
- Teaching assistant for the CSE 110 Software Engineering course, where I am responsible for managing and leading 6 teams of students (totaling 60 students) in their course project. In addition, I conducted lab sessions where I provided instruction and assistance with software development assignments.