

# Chaitra Boggaram

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## Education

### Master of Science in Computer Science and Engineering

Expected Jun 2024

Santa Clara University

GPA: 3.8

Relevant Coursework: Distributed Systems, Cloud Computing, Software Engineering, Artificial Intelligence, Object-Oriented Design

Teaching Assistant: Computer Networks (Winter 2023 - Present)

### Bachelor of Computer Applications

May 2016

Bangalore University

GPA: 3.6

Relevant Coursework: Database Management, Computer Networks, Data Structures and Algorithms, Web Development

## Professional Experience

### Software Developer, Frugal Innovation Hub

Jan 2024 - Present

- Developing Flutter application using Dart with Firebase for database functions and designing application architecture using Figma
- Enhanced user authentication with REST APIs in Dart using OAuth 2.0, Apache Kafka integration, and implemented Test-Driven Development (TDD) for optimal functionality and 20% increase in response times
- Integrating Anthropic Claude (LLM) via AWS Bedrock in a Flutter app on AWS Amplify, dynamically generating contextual clues for adaptive student support in quizzes and virtual sessions

### Software Engineer, NXP Semiconductors

Jun 2020 - Jun 2022

- Led development of Java Spring Boot microservices on AWS EKS, achieving 30% increase in application availability with ~99.95% uptime, through auto-scaling, cost-effective resource utilization, and Docker containerization
- Spearheaded and mentored 2 interns to implement email click tracking system with Amazon SES, API Gateway, Lambda functions, S3 storage, and Redis cache recovery, leading to 25% improvement in analyzing phishing campaign engagement
- Integrated Git for version control, led code reviews, orchestrated CI/CD pipelines with AWS Code Pipeline, and managed agile development with JIRA in 5 cross-functional teams
- Built C++ tool for parsing log files, extracting information, generating concise reports for system administrators and support teams
- Enhanced data transfer efficiency by 20% and reduced API response times by 15% through JSON data handling, gRPC integration, and transitioning to GraphQL in React components
- Utilized AWS CloudWatch for real-time monitoring and AWS IAM for enhanced security, achieving 25% reduction in security vulnerabilities through proactive alerting and compliance measures
- Architected and executed an AWS public cloud network framework using Terraform for 89 branch offices, establishing secure zones with 20 internet gateways, 45 network ACLs, 70 route tables, and 120 security groups
- Optimized Postgres, and Cassandra databases, and optimized data structures, achieving 20% efficiency gain applicable to semiconductor testing
- Orchestrated Golang microservices with Elasticsearch for agile data governance, achieving 90% data recovery in on-premise to cloud ETL

### Junior Software Engineer, Tata Consultancy Services

Dec 2016 - May 2020

- Built DynamoDB (NoSQL) GUI app for secure CRUD operations, achieving 30% boost in data efficiency and 20% faster user response
- Developed Python scripts with Splunk's REST API to block ~100 weekly security threats, enhancing real-time protection
- Created PyTest unit testing for Python scripts, ensuring a 20% increase in the reliability of security features
- Enhanced security operations by 30%, streamlining processes through Linux shell scripting, SQL queries, task automation (such as USB blocking), and implemented Power Automate for email notifications, resulting in an 80% reduction in identified vulnerabilities
- Contributed to the full-stack development of TCS's internal application using HTML, CSS, React.js, and JavaScript for frontend, Node.js for backend, and implemented MySQL solution for database, achieving 25% boost in data processing efficiency
- Automated Windows Active Directory CRUD actions with PowerShell scripts, reducing workload by 30% and increasing efficiency by 25%

## Projects

### Kubernetes Key-Value Store

Mar 2024 - Mar2024

- Built Key-Value store on Kubernetes, employing Docker Containers within Minikube pods, utilizing the FastAPI web framework for API development, and incorporating Huey as REDIS queue and storage solution with replication and autoscaling features

### Crypto News Notifier (Pub-Sub)

Sep 2023 - Nov 2023

- Developed real-time cryptocurrency Pub-Sub news notifier in Python, integrated both custom broker and Kafka options for efficient message passing, added CoinCap API for live prices, facilitated message generation through Postman

### Plagiarism Detector for ChatGPT

Jan 2023 - Mar 2023

- Led team of 3 to create a Flask application using Python, HTML, CSS for plagiarism detection, incorporating PyTorch-based Machine Learning modules for accuracy, invoked ChatGPT API completion for data comparison with 70% accuracy
- Research paper accepted at 8th International Conference on Computer and Information Science and Technology

## Skills

**Programming Languages & Web Technologies:** Python, Java, HTML, CSS, Dart, C++, JavaScript, React.js, Node.js, Go, SQL, JSON

**Frameworks:** Flutter, Firebase, Anthropic Claude (LLM), Java Spring Boot, FastAPI, Huey, Flask, PyTorch, scikit-learn, NLTK, gRPC

**Cloud & Virtualization:** Amazon Web Services, Microsoft Azure, Docker, Kubernetes, DevOps, CI/CD

**Other Tools:** Terraform, CloudFormation, Splunk, Agile, SDLC, Jira, Git, ServiceNow, Linux, Shell script, MySQL, MongoDB, GraphQL, Postman