SURABHI

Los Angeles, CA (Open to Relocation)| (213) 574-8545 | s279497@usc.edu | LinkedIn | GitHub | Portfolio

*Software Engineer with **3 years** of experience in developing scalable applications and optimizing systems using **Java, Python, C, React, AWS, Docker, Kubernetes, CI/CD pipelines**, and **REST APIs***

EDUCATION

Master of Science in Computer Engineering, University of Southern California (USC) (GPA: 3.4/4) **August 2023-May 2025**
Courses : Computer Networks, Wireless Network, Artificial Intelligence, Machine Learning, Computer Architecture, Data Structures in C++

Bachelor of Engineering in Computer Science, NMAM Institute Of Technology (GPA: 3.7/4) **August 2016-May 2020**

TECHNICAL SKILLS

Programming Languages	C, Java, C++ Python, JavaScript, Golang, Rust, Objective-C
Web Technologies	HTML, CSS, ReactJS, Node.js, Express.js, jQuery, Redux, AJAX
Frameworks & Libraries	Spring, Hibernate, Laravel, Vert.x, Apache Kafka, Java Messaging Service, Pandas
Database Technologies	MySQL, Oracle DB, Redis, DB2, MongoDB, DynamoDB, Query Optimization
Cloud	Amazon Web Services, Kubernetes, Docker, Elasticsearch
Other Technologies	Linux, Jenkins, CI/CD, Grafana, Ganglia, Visual VM, Agile methods, JBoss, Distributed Systems

EXPERIENCE

SOFTWARE INTERN | MEDIBLES, Los Angeles, CA **May 2024-August 2024**

- Redesigned the **Adobe API** service by migrating from **JWT to OAuth**, increasing security and reducing token-related issues by 30%
- Developed an **SQS queue** to handle up to 10,000 messages daily, ensuring efficient data management and processing
- Converted **WordPress** assessments into a **React** app using **TypeScrip**t, fostering **cross-functiona**l collaboration with design teams
- Built an **AWS Lambda** function to interact with PDF/Doc API services, minimizing response times by 20%
- Streamlined patient data management with **Tableau**, cutting data retrieval time by 40% and boosting clinical efficiency

SOFTWARE ENGINEER | **INFORMATICA**, Bangalore, India **April 2022-July 2023**

- Collaborated with 10+ team members using **Agile** Scrum, improving project delivery by 20%, while conducting **code reviews** and monitoring **Maven Jenkins pipelines** to ensure successful installer builds
- Led the upgrade of **Jgroups**, resolving a critical blocker for 70% of customers and improving system performance by 35%
- Contributed to the upgrade of the default dashboard in **Informatica B2B Data Exchange**, utilizing **Java**, **React**, **SQL**, **Git**, **Jenkins**, **JavaScript**, and **LogiXML**, improving real-time data reporting by 30% and eliminating the need for additional licensing and configuration
- Optimized B2B Data Exchange using **Java, JavaScript**, and **MS-SQL**, configuring **job queues** for MFT Remote **Endpoint**-Receive and Send, **reducing file transfer time by up to 50%** through **batch** processing of large files
- Re-engineered a distributed, multithreaded system using Apache Kafka to ensure data consistency, enable asynchronous transaction processing, reduce daily I/O by 80GB, and increase platform scalability by over 10 times
- Created a feature-id driven user settings configuration that supports field-level updates, **cutting the JSON payload size by 80%** and eliminating schema conflicts, resulting in improved scalability and reliability for the risk monitoring platform

ASSOCIATE SOFTWARE ENGINEER | **INFORMATICA**, Bangalore, India **October 2020-March 2022**

- Played a crucial role in the migration of **Kubernetes** by developing a **Python** application for generating configuration files and automating the scaling of containerized application, ensuring seamless integration and operation within new infrastructure
- Tested and validated **O365 mailbox server integration** with **SMTP** servers, ensuring reliable retrieval and sending of email
- Optimized 15 backend **microservices** and **RESTful APIs** using **Java Spring Boot** and Apache **Kafka**
- **Collaborated** in a **hackathon** to build a **chatbot**, cutting **JIRA** search time by 60% for customers with **Node.js**, JIRA API, Dialogflow

PROJECTS

Blood Bank Management System *| Link*

- Developed a **cloud-based Blood Bank Management System** using **AWS**, Cassandra **NoSQL**, **Java**, and **Node.js**, integrating **Google Maps API** for location-based search and **Firebase** for user authentication, improving blood donor search efficiency by 40%

Emotion Detection System *| Link*

- Built an **Emotion Detection System** using **MobileNet** with the **FER2013 dataset**, achieving **85% accuracy**
- Integrated **LLM** for **real-time feedback** and **user interaction**, while utilizing callbacks to improve performance

Socket programming project *(EE 450 Computer Networks) | Link*

- Designed a **TCP/UDP**-based **client-server** architecture with efficient **socket** communication, and data structures, resulting in a 40% improvement in response times for book querying and ensuring inventory tracking accuracy of over 95%

Fault Simulation and ATPG Implementation *(EE 658 DFT) | Link*

- Implemented **fault simulation** and **ATPG** (**D-Algorithm**, **PODEM**), achieving 100% **fault coverage** by leveraging **SCOAP** metrics and
- Developed 14 modular commands (e.g., RTPG, DFS, PFS) through **teamwork**, with detailed performance reports

Google Photos clone using React Native *| Link*

- Created a Google Photos clone with **React Native**, ensuring seamless cross-platform functionality for both web and mobile
- Boosted media performance with **ImageKit**, increasing loading speeds by 40% and delivering a smoother user experience across device

Accelerating ResNet-18 Interference on Kria KV 260 FPGA *(EE 511 ML in hardware accelerators) | Link*

- Trained and tested a quantization-aware ResNet-18 model on CIFAR-100, achieving 93% accuracy, using Python, PyTorch, Vitis HLS for FPGA optimization, and 8-bit quantization