Rohan Madhani

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EDUCATION

University of Southern California, Los Angeles, California.　　　　　　　　　**January 2021-December 2022**
Master Of Science, Computer Science　　　　　　　　　　　　　　　　　　　　　　　　　　**(GPA 4.0/4.0)**
Coursework: Analysis Of Algorithms, Database Systems, Operating Systems

D. J. Sanghvi College of Engineering, University of Mumbai, India　　　　　**August 2014-May 2018**
Bachelor of Engineering in Computer Engineering with Distinction　　　　　　　　　　　　*(CGPA 9.43/10)*
Relevant Coursework: Data Structures, Machine Learning, Web Technologies, Object-Oriented Programming

SKILLS

- Languages: C, C++, Java, Python, Shell Script, TypeScript, JavaScript, Android
- Platform Technologies: AWS, GCP, Docker
- Databases: MySQL, NoSQL, DynamoDB, ElasticSearch
- Frontend Development: HTML, CSS, JavaScript, Angular, Android
- Backed Development: Node, Spring Boot, JUnit, Mockito, Maven

PROFESSIONAL EXPERIENCE

USC Minerva Labs, Los Angeles, United States　　　　　　　　　　　**June 2021-September 2021**
Software Developer (Technologies used: Flask, PHP, MySQL)
- Currently working on project named 'Patentopia' which curates and presents out patents to end-user with respect to the PI Owner/Firm.
- Multithreaded code to fetch thousands of records reducing response times from 48 hours to just 4 hours.

USC Information Sciences Institute, Los Angeles, United States　　　　　　　**January 2021-June 2021**
Student Worker (Technologies used: Ansible, Shell Scripting, Slurm)
- Maintained and managed a 30 node cluster so other team members can run jobs seamlessly.
- Setup alerting and monitoring for cluster to reduce outages of cluster.

Quantiphi Analytics, Mumbai, India.　　　　　　　　　　　　　　　　**July 2018-December 2020**
Cloud Software Engineer (Technologies used: Java, Spring Boot, AWS)
MicroService Architecture - Insurance Domain
- Worked on building low latency micro services (response time < 2 seconds) backend APIs handling millions of number of requests from Spring and Spring Boot applications for Liberty Mutual Insurance (LMI).
- Played a key role in designing high level workflows within micro services by breaking down monolithic legacy stack to a micro services based one.
- Leveraged Factory/Builder Design patterns for integration with rule engines to validate OEM insurance proposals.
- Setup highly scalable, fault tolerant systems to monitor and trace requests within micro services.

DataLake - Insurance Domain
- Designed and Deployed entire Data Lake architecture on AWS Cloud for ETL operations.
- Expedited deployment process by developing CICD Pipelines using Jenkins, IAC scripts such as CFTs.
- Enabled Centralized Logging of entire architecture using multi-node ELK Stack.
- Smoothened out fresher onboarding by developing scalable, serverless online video portal platform by availing AWS technologies such as S3, DynamoDB, Lambda, Cognito, API Gateway.

PROJECTS

MultiClass Emotion Analysis using NLP (Technologies used: Flask, TensorFlow, NLTK, Karas)
- Built a functional classifier based on Machine Learning and Natural Language Processing which recognizes human emotion from text into six classes.
- Developed ML pipeline and trained three models namely SVM, RNN-LSTM and Naïve Bayes using concepts of data parallelism and model parallelism in TensorFlow and deployed models as REST api using Flask.

Weenix (Linux-Like) Operating System Kernel
- Implemented creation and synchronization of processes and threads inside kernel.
- Implemented a virtual file system between OS kernel and actual file system through S5FS file system.
- Implemented virtual memory management system which included paging, copy-on-write, mmap, brk system calls.

Weather Search WebApp (Technologies used: HTML, CSS, JavaScript, Angular, Node, Android)
- Created a dynamic web application where user can get weather results by entering any location/current location.

CERTIFICATIONS

- AWS Solution Architect - Associate, AWS Developer - Associate.
- Published a paper titled 'Multiclass Emotion Analysis using NLP' in 'International Journal of Science and Research'.

ACTIVITIES

- **Chairperson –** DJ Codestars . A programming committee of college. Held lectures, contests and doubt sessions every week for students on various algorithmic and data structure concepts pertinent for competitive programming.