SAI KIRAN MADUPU

San Jose, CA | +1 (669)-252-4020 | saikiran.madupu@sjsu.edu | LinkedIn: m-sai-kiran | GitHub: 1919kiran

EDUCATION

San Jose State University, San Jose, CA **Aug 2021 – May 2023 (expected)**
Master of Science in Computer Software Engineering (GPA – 3.5/4.0)
Relevant Courses: Distributed Systems, Cloud Computing, Data Mining, Enterprise Application Development.

Osmania University, Hyderabad, India **Aug 2015 – May 2019**
Bachelor of Engineering in Information Technology (GPA – 4.0/4.0)
Relevant Courses: Data Structures and Algorithms, Object Oriented Programming, Databases, Computer Networks.

TECHNICAL SKILLS

Programming Languages	: Java, Python, JavaScript, Scala, Go, PL/SQL
Frameworks & Libraries	: Spring, Django, Flask, NodeJS, React, Express, Bootstrap
Databases	: Oracle, PostgreSQL, MongoDB, Elasticsearch, Ehcache, Redis, Firebase
Cloud Technologies	: AWS Cloud (EC2, S3, RDS), GCP (Compute Engine, BigQuery)
Networking	: RESTful API, gRPC, TCP, HTTP, Websockets, Nginx, Apache Tomcat
DevOps	: Git, Subversion, Jenkins, Docker, Kubernetes
Enterprise Tools	**:** Logstash, Kibana, Grafana, Apache Kafka, Apache Spark

PROFESSIONAL EXPERIENCE

Software Engineer III Intern – Walmart Global Tech, Sunnyvale, CA **May 2022 – Aug 2022**
- Developed a dashboard to consolidate data discrepancy in Elasticsearch indices across four datacenters.
- Built a data pipeline for product attributes after pre-processing, transforming and storing the Kafka messages in Elasticsearch index.
- Reduced wildcard search time by 400% by researching, implementing and evaluating multiple search analyzers for performing regular expression search on product name.

Software Engineer II – Ivy Comptech (Entain), Hyderabad, India **June 2019 – June 2021**
- Worked as a Platform developer in the Core Engineering team on building large-scale, distributed backend platform based on microservices architecture that enabled millions of users to play online games.
- Developed a game session limiter that increased responsible gaming behavior of the users by 75%.
- Achieved regulatory compliance by creating a notification service serving more than 1 million users across multiple client systems.
- Configured Logstash for backend services to create a log analysis pipeline using ELK that reduced incident SLA by 10%.
- Enhanced backend platform architecture by transforming monolith services into scalable microservices.

Software Engineering Intern – Ivy Comptech (Entain), Hyderabad, India **Jan 2019 – June 2021**
- Collaborated with two interns and developed a test automation framework using Selenium that automated more than 50% of the backend APIs, resulting in the timely delivery of a landmark migration project.
- Involved in upgrading Terracotta distributed caching servers that are used by over 50 services.

PROJECTS

Distributed File Storage Manager **[Python, gRPC, JWT, SQL]**
- Engineered a fault-tolerant, secure, and scalable distributed network of nodes which are used to read and write files.
- Implemented a gateway for uploading and downloading data, validating tokens, and adding nodes to the network.

Remote Code Execution Framework **[Python, Flask, Redis, Multiprocessing]**
- Developed a framework for code execution with configurable load balancing algorithms and dashboard to visualize job metrics and worker node status.
- Implemented auto-scaling feature that adds more nodes to the service if overall CPU utilization crosses a threshold.

Crime Predictor **[Python, Facebook Prophet, Google Colab, Pandas, NumPy, Matplotlib, Scikit-learn]**
- Performed time series analysis on Los Angeles crime dataset to predict the future crime pattern.
- Built a neural network that gives out the probability of types of crime that could occur based on a person's attributes.

Autonomous Vehicle Rental Application **[React, NodeJS, Flask, Websockets, AWS RDS, EC2, MongoDB]**
- Created a full stack application for renting autonomous vehicles simulated in a CARLA server and deployed in AWS.
- Implemented a real-time sensor data dashboard using websockets to visualize vehicle and environment data.

Adaptive Steaming Application **[Python, gRPC, Multithreading]**
- Developed an algorithm that adapts to varying network conditions by changing the packet size to minimize the latency.