AKASH RUPAPARA

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Education

Master of Science in Software Engineering   January 2021 - December 2022
San Jose State University   *San Jose, CA*
Related Coursework: Enterprise Distributed Systems, Data Mining, Enterprise Software Platforms

Bachelor of Technology in Information and Communication Technology   August 2016 - May 2020
School of Engineering and Applied Science, Ahmedabad University   *Ahmedabad, Gujarat*
Related Coursework: Advanced Data Structures and Algorithms, Software Engineering, Big Data Analytics

Technical Skills

Programming Languages	: C/C++, Java, Javascript, Python, Hack, PHP, GoLang
Frameworks	: NodeJS, REST APIs, GraphQL, Apache Kafka, ExpressJS, Spring, Hadoop, Django
Databases	: MySQL, MongoDB, PostgreSQL, SQL
Cloud	: AWS- Cloud (EC2, S3. ECS, RDS), Docker
Libraries	: ReactJS, Redux, Spark, Pandas, NumPy, Matplotlib, Tensorflow, Keras

Experience

Software Engineer   January 2023 – Present
Lacework Inc.   *San Jose, CA, USA*
- Contributing as a Software Developer at Lacework using technologies like Go, React, Typescript, Java and Kubernetes.
- Developing end-to-end features integrating in existing application to enhance customer experience and product value.

Software Engineering Intern   May 2022 – August 2022
Meta (Formerly known as Facebook) Platforms, Inc   *Seattle, WA, USA*
- Facilitated full stack project by adding new **view player profile** feature and two other updates in screens/ functionalities with the "Fantasy Games" team in Facebook App (impact to **5 Million** users).
- Proposed and executed plan to add pagination with new UI in screens having huge data to improve app performance by **30%**.
- **20%** increase is observed in picks made/ picks edited from game home with new feature introduced likely to increase as experiment runs for long.
- Refactored the code to make certain functions and database queries generic.

Software Engineering Intern   January 2022 – May 2022
SS8 Networks Inc   *Milpitas, CA, USA*
- Design, implement and maintain large distributed React-based applications (Java Spring boot in Backend) and micro-services deployed at a customer site. Envisioning the big picture and driving the team to deliver high-quality products on time.
- Advised UX team to develop easy to use UI. Directed work of optimizing 2 features to make UX interactive.
- Coordinated with customer to propose and created new screen designs for user screens requested by **75%** of users.

Software Engineer   June 2020 – December 2020
Shriji Technoaspire Pvt Ltd   *Gandhinagar, Gujarat, India*
- Designed and developed E-commerce and company's profile website for the company with ReactJS, NodeJS and MySQL.
- Co-ordinated on Web portal for Smart electric meters to analyse electricity usage and home automation. Saved electricity consumption upto **20%** by monitoring with app.
- Incorporated Redux with memoized selectors to achieve optimum performance (upto **90%**) for rendering components.

Machine Learning Intern   June 2019 – November 2019
VNurture Technologies   *Ahmedabad, Gujarat, India*
- Image processing with Django and flask using Machine learning algorithms to develop fashion recommendation system.
- Model recommended clothes for input image of person with approximate accuracy of **92%**.

Academic Projects

Indeed-Clone | MERN Stack, REST APIS, Redux, Redis, Kafka, Docker, AWS, GraphQL
- Coordinated with team to develop distributed system using micro-services for job board facilitating employers, job-seeker and Admin roles. Deployed Application on EC2 instance and storing images in S3 bucket.
- Implemented functionalities for job search, job application, chat, company reviews and many more. Reduced the Latency by **10%** using Data-pooling option available in MongoDB to enable reuse of multi-threaded connections.
- Integrated Redis caching to improve throughput and reduce latency. Integrated message broker (kafka) to achieve scalability and reliability of API requests (**10k user support**). Tested application using JMeter and Mocha.

Vaccine Management System | ReactJS, REST APIs, Java, Spring Boot, AWS, MySQL
- Facilitated team of 4 people to develop Vaccine Management System where user can login to book slots for vaccination and manage appointments for clinics added by the admin.
- This Influenced to go **100%** paperless and users get vaccinated on time by getting reminders and schedule appointment remotely. Integrated OAuth with Google with spring security for login and Sign-up with email verification. Tested app for **20k** user support.

COVID CT Scan Diagnosis | PCA, Numpy, Pandas, Tensorflow, ML Algorithm
- Analyzed Patient's CT-Scan images of lungs to predict diagnosis of COVID-19 applying Data Mining and Machine Learning Algorithms. Achieved **10%** more accuracy than baseline methods described in reference research paper.
- Enhanced dataset by combining data from three to four sources and performed augmentation as there was less data available due to privacy concerns. Trained model on approx **25k** Images.

Publications

Research Paper entitled **"Advanced Assistance Services Using Hybrid Ambulance System"** presented at Winter Simulation Conference at Maryland, USA and Published in **IEEE**(LINK). Developed an algorithm to minimize the average response time of ambulance to reach to the hospital from accident spot, further reduced the casualty rate. Influenced an overall time reduction of approximately 3 minutes with a **97%** survival rate.