EDUCATION

North Carolina State University

Raleigh, NC

Masters of Science in Computer Science; GPA 4.0

Jan. 2021 - Present

Coursework: Computer & Network Security, DBMS, Automated Learning and Data Analysis, Software Engineering, Design & Analysis of Algorithms

• Dhirubhai Ambani Institute Of Information and Communication Technology Bachelor of Technology in Information and Communication Technology; GPA: 8.19/10

Gandhinagar, India July. 2014 - June. 2018

Email: rajshahworks@gmail.com

LinkedIn: linkedin.com/shahrk97

TECHNICAL SKILLS

- Languages & Frameworks: Java, SpringBoot, JavaScript, NodeJS, Express, Angular, Python, Go, bash, React, Bootstrap, SQL
- Software & Libraries: Redis, RabbitMQ, AWS, Docker, Jenkins, Git, MongoDB, Postman, JMeter, BeautifulSoup, Pandas
- Strengths: Software Development, System Design, Objet Oriented Programming, Database Management, Data Structure & Algorithms

EXPERIENCE

• North Carolina State University

Raleigh, NC

Research Programmer, Graduate Research Assistant

Dec 2020 - Present

- o SimStudent is an ML-agent used as a synthetic tutee for students to learn by teaching
- Worked on making SimStudent available on the web by transforming the existing java based desktop application to a web based application using Spring Boot, Angular & MySQL
- Made it support concurrent users and implemented service for health checking servers and routing users to appropriate servers (as routing needed to be sticky).

• General Electric Bengaluru, India

Software Engineer, Tech Anchor

June 2018 - Present

- Developed an application that models cost of service agreements between GE and wind farm owners. Technologies used: Spring Boot, Angular, Node and other AWS services
- Setup OAuth2 authentication and authorization for the cost modelling application
- $\circ\,$ Created a reverse proxy service using Node that acted as an entrypoint for incoming requests
- Developed Raven, a service for sending targeted email, text message and push notifications based on user location. Technologies used: Spring Boot, RabbitMQ, UrbanAirShip
- o Dockerized local development setup and automated deployment using Jenkins
- o Created generic CRUD API to enable dynamic crud operations without any boiler plate (used for prototyping)
- o Led migration from Cloud Foundry to AWS, as well as efforts for refactoring and performance optimization

Software Engineer Intern

Jan 2018 - June 2018

- o Developed a notification system for handling push notifications. Technologies used: JavaScript, NodeJs, Express, Spring Boot
- o Handled the end to end development of a product catalog web app. Technologies used: Angular 6, NodeJS, Express

Dhirubhai Ambani Institute Of Information and Communication Technology

Gandhinagar, India

Teaching Assistant for Data Structures & Algorithms, Research Assistant

o Sentiment Analysis - created Python script for collecting, cleaning and processing more than 10 Million tweets

PROJECTS

- Realtime Chat Room Application: Developed a real time chat room application using Spring Boot, Web Sockets and RabbitMQ
- Big Box Reatiler Database Service: Designed and implemented a database service for a Costco like store using MariaDB & Spring Boot. Performed partitioning, indexing, and query optimizations to improve performance
- Graft: Developed a raft based distributed Key Value store in Go, did a manual implementation of raft instead of using an existing library
- API Rate Limiter: Developed an API rate limiter in NodeJS using Express and Redis
- Casper web game: Developed a game similar to flappy-bird using JavaScript, added social media login using OAuth2 with SpringBoot and maintained leaderboards using Redis

Leadership & Awards

- Led knowledge sharing sessions across GE for sharing software engineering practices and concepts
- 2 Impact Awards, General Electric
- International Rank 5, International Mathematics Olympiad 2012