

Deepen Patel

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EDUCATION

San Jose State University **Master of Science, Software Engineering** *January 2020 - December 2021*
Courses: Large scale distributed systems, Software Systems Engineering, Enterprise Software Overview, Data mining, Software Security
Gujarat Technological University **Bachelor of Engineering, Computer Engineering** *August 2015 - May 2019*
Courses: Data structures and algorithms, Database management Systems, Operating Systems, Web Applications development, Computer Networks, Machine Learning, Big data Analytics

SKILLS

Programming Languages: Python, Java, JavaScript, C/C++, Go
Back-end development: Node.js, Express.js, Spring framework, Passport.js, JWT, GraphQL, Apache Kafka, REST APIs
Front-end development: React, Redux, HTML, CSS, Bootstrap, JQuery
Databases: SQL (MySQL, Microsoft SQL server), NoSQL (MongoDB, Redis)
Cloud and DevOps: Amazon Web Services (EC2, RDS, S3, Security Groups, Auto-scaling, VPC, Load Balancer), Docker, Source control (Git), Automation unit and integration testing (PyUnit, JUnit, TestNG, Mocha), Application load testing (JMeter), Selenium, Jenkins
Data Science/Analytics: NumPy, sklearn, pandas, Matplotlib, Hadoop
Certifications: Microsoft Technology Associate – Software and Database Fundamentals
Jenkins Essential Training - LinkedIn Learning (In progress)
Professional iOS development – Codepath.org (In progress)
Other: Windows, MacOS, Unix/Linux Platform, Object-oriented programming, Software Design patterns, Agile development methodology, Problem solving, Software development lifecycle, Test driven development

WORK EXPERIENCE

Software Developer Intern, Pratham Notebook *June 2019 - November 2019, Ahmedabad, India*

- Improved sales by 15% by designing database (MySQL) to keep track of sales that allowed for more efficient analysis.
- Implemented backend REST APIs in Node.js to gain high performance and handle concurrent connections.
- Developed intuitive and responsive UI interfaces with reusable components and scalable framework (React.js).
- Developed management systems and brand website in conjunction with product and design team for a Consumer goods startup.

PROJECTS

Amazon Prototype (MERN Stack, Redux, Apache Kafka, MySQL, Redis, Passport.js, JWT) *April 2020 – May 2020*

- Led the development of a secure eCommerce web app similar to amazon.com with 10000 products in a team of five members.
- Designed the software system architecture consisting of a client layer, server layer, message queuing system, and database layer.
- Developed backend REST APIs in Node.js and Express.js which takes client requests and forwards them to messaging queue.
- Improved system efficiency by 15-20% by setting up Apache Kafka as a messaging queue to decouple APIs and business logic.
- Implemented token-based authentication and authorization, tested performance using JMeter and wrote test cases.
- Deployed on AWS EC2 instance with auto-scaling, security groups and load balancer for high availability.

Handshake Prototype – Job searching platform (Java, Spring, React.js, MySQL, Aspect oriented programming, Docker, Jenkins) *April 2020*

- Developed a scalable, interactive and robust full stack application, where students can apply to job postings, register for eligible events posted by companies, look at other students' profiles and communicate with them via messages.
- Implemented backend services using technologies such as Spring framework, AOP, JPA and designed user interfaces using React.js.
- Created an automated CI/CD pipeline to run tests and release the updates to AWS EC2 cloud as dockerized containers.

Traffic Governance System (Python, YOLOv3, OpenCV, Flask, HTML, CSS, Docker) *March 2020*

- Built an AI system that deals with the flow of traffic at crossroads in urban areas to better direct vehicles in appropriate time.
- The system takes a video of lanes as an input, detects the vehicles and calculates the number of vehicles in each lane using YOLOv3.
- Then, it sets the timer for that lane and balances the timer for other lanes accordingly.

Sentiment Analysis of Twitter Data (Hadoop, HDFS, Flume, Hive) *March 2019 - April 2019*

- Built a system to perform sentiment analysis on social media data. Stored live tweets using Twitter-API on any topic in HDFS.
- To simplify further classification, got rid of unnecessary data which wouldn't help in analysis using Hive.
- Divided all the tweets into 3 groups, based on their polarity which is positive, negative or neutral.
- Plotted these insights onto the world map to conclude which areas are more in favor of or against a particular topic.

Credit Card Detection (Java, Design Patterns, JUnit, Object-oriented programming) *April 2020*

- Built an application for verification and classification of Credit cards taking input from different file formats (.CSV, .JSON, .XML) in java.
- Followed Gang of Four - Design Patterns and principles (Strategy, Chain of responsibility) to define the architecture of the application.