Simarpreet Singh

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EDUCATION

University of Michigan — Ann Arbor, MI
BSE in Computer Science — *Aug 2020 - Expected April 2024*
- ***Coursework:*** Data Structures & Algorithms - Foundations of Computer Science - Computer Organization
  Web Systems - Web Development - Software Engineering

EXPERIENCE

JPMorgan Chase & Co. — Chicago, IL
Software Engineer Intern — *June 2022 - August 2022*
- Added a "Smart" Region on **GemFire** servers resulting in REST API response time dropping from **29 to 5 ms**.
- Implemented **real-time eviction** of stale data utilizing update messages consumed from **Kafka** topic.
- Built a Bulk API to help clients achieve a **High-Frequency** Transaction Per Second goal.
- Migrated from **GemFire** to **Oracle Cloud Database** to be able to implement and support **API Pagination**.
- Carried out performance testing on code deployed to **Kubernetes** platform using **JMeter**.

Dakota Systems — Chicago, IL
Full-Stack Web Development Intern — *June 2021 - August 2021*
- Worked on **Node.js** Salesforce Extension app to fetch and display Salesforce data on front-end for Sales Team.
- Developed REST APIs and utilized **SOQL** for Salesforce Extension application implementation.
- Revamped **Dakota Systems Website** using **Node.js** and **Tailwind UI**.
- Utilized **eXist-db** to add dynamically generate web page content feature.
- Added **User Authentication** via **OAuth 2.0** and **Passport.js** to website for clients.

The 357 Company — Northlake, IL
Freelance Web Developer — *June 2021 - July 2021*
- Hired to transition the **357 Company Website** from WordPress to **Node.js**.
- Created REST APIs served by **MongoDB** to create a new **Blog Page**.
- Developed a UI for the 357 News Team to create, edit, and post blog articles.

PROJECTS

Personal Website | *Node.js, JavaScript, Tailwind CSS, AWS, MongoDB* — **Website** —
- Developed a full-stack web application utilizing **MongoDB** to serve REST APIs.
- Implemented a professional front-end and a **UI/UX** for managing Projects and Articles.
- Deployed **Node.js** application to **AWS EC2** instance and distributed with **Amazon CloudFront**.

Recipe Book | *Angular, TypeScript, Firebase* — **Website** —
- Developed an application with functionality to create, delete, and edit recipes.
- Added feature for ingredients to be pushed from a the Recipe List to a Grocery list.
- Utilized **Firebase** to manage user authentication feature and user information across application in real-time.
- Acquired experience building and deploying an industry-grade project using **Angular** and **TypeScript**.

Classifying Piazza Posts | *C++*
- Applied natural language processing and machine learning techniques to identify the subject of a Piazza post.
- Implemented binary tree using recursion and map data structure using templates and comparators.
- Trained program on 11365 examples. Successfully classified 2602/2988 posts correctly (87% success rate).

TECHNICAL SKILLS

Languages: C/C++ • Java • JavaScript • Java Spring Boot • HTML5/CSS • SQL • SOQL • LaTeX
Technologies: Node.js • GemFire • Maven • Angular • Kubernetes • MySQL •AWS • Firebase • Docker • Git • Linux
Databases: Oracle • MongoDB • eXist-db • Apache Geode