MUSTAFA ALI

SOFTWARE ENGINEERING STUDENT

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mustafaali789 MustafaAli789

SUMMARY

Inquisitive fourth year Software Engineering student with a strong foundation in modern web development, software architecture and automation.

EDUCATION

University of Ottawa 2018 - Jan. 2023
BASc Software Engineering
4.0/4.0 GPA | Member of Software Engineering Student Association, runner up of local hack day, and participant in UOttaHack 2020.

EMPLOYMENT

RBC, *Fullstack Developer*, Toronto, Ontario May 2021 - Aug. 2021

- Maintained client side for a business financial services portal using angular, rxjs and NgStore and helped to develop accessibility feature requirements
- Involved in proof of concept research for new technologies and solutions and implemented prototypes
- Helped to develop a content management system in kotlin with spring boot, hibernate, github api and vuejs as a side project to directly aid developers in reducing time spent on content related bugs and features

ProntoForms, *Backend Developer*, Kanata, Ontario Sept. 2020 - Dec. 2020

- Built and maintained the server side for a low code, field service management solution in Spring + Hibernate
- Integrated 3rd party software for data collection and customer success analysis into the application
- Built an internal API for dynamic logging from concept through deployment and helped develop a circuit breaker for AWS SQS async job filtering with redis
- Completed testing on all levels including E2E tests, integration and unit using Rest-Assured, Selenium and JUnit

IBM, *Backend Developer*, Ottawa, Ontario Jan. 2020 - Apr. 2020

- Migrated front end UI components to use IBM Carbon to provide a consistent design theme, increase app responsiveness, and introduce a mobile first approach
- Implemented a new flow for interfacing with the QRadar Pulse application from concept through development using React + Redux Saga with accessibility standards in mind

Saba Software, *Automation Specialist*, Kanata, Ontario May 2019 - Aug. 2019

- Wrote automated test cases with the Selenium Framework using Java
- Developed an interactive and functional portal to provide statistical information on test cases with Java Spring Boot, Thymeleaf, and MySQL
- Updated styles and scalability of code by introducing modern front end technologies such as Bootstrap (grid), Chart.js for graphs, asynchronous programming, and the idea of componentizing parts of the portal for easy reuse

SKILLS

CORE PROGRAMMING: Java 11, Python, Javascript (ES6 to ES9), Kotlin, Typescript
WEB AND DESKTOP DEVELOPMENT: React + Redux, React Router, AJAX, HTML5 + CSS3, Bootstrap/Material UI, ChartJs, NPM, Node + ExpressJs, AWS Serverless, Thymeleaf HTML Engine, Webpack 4 + Babel, Sessions + JWT, Java Spring, PyGame, JSP, Flask, NGINX, Angular, NgStore
DEVELOPMENT TOOLS: Git, JIRA, Jenkins, Heroku, Docker
DATABASES AND ORMS: MySQL + PostgreSQL, MongoDB, Redis, Hibernate, Knex, Firebase
MACHINE LEARNING: Pandas, NumPy, Scikit-learn, Tensorflow

PROJECTS

Reddite Lite

- Reddit clone built with Spring Boot MVC, Jpa/Hibernate + PostgreSQL, JWT authentication/authorization with Spring Security angular and rxjs
- Firebase cloud storage for media support, junit + mockito for testing and STOMP for websocket impl (WIP)
- Supports subreddits, posts, comments, user registration/login + verification links, user profiles, live messaging/ notifications + media uploads (WIP)
- Live app: https://reddit-lite-ang.herokuapp.com/

Watchparty Extension

- Chrome extension for video playback control synchronization using websocket technology
- Supports play, pause, seek, speed control synchronization as well as live messaging, live syncs, offset times, room admins, etc
- Built with pure typescript + chrome apis and socket.io + express all hosted on EC2 with NGINX as a reverse proxy
- Chrome Webstore Link: https://chrome.google.com/webstore/det party-extension/pajmaeknaljkkmaaiibjpcpokeaedokd

Raycaster Graphics Engine

- An implementation of the widely popular raycaster engine used in games such as doom developed using pure typescript
- Rendering 3d simulation + shadows, collision detection, audio and A* pathfinding all included
- Live app: https://mustafaali789.github.io/raycaster-engine/public/

Neural Network Framework and MNIST Classifier

- A general neural network framework developed from scratch using Python and NumPy
- MNIST dataset trained on the framework and deployed on a Flask/React web app allowing users to draw a number and network returns predicted number
- Live app: https://mnist-native-classifier.herokuapp.com/