Zain Afzal

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EDUCATION

University of Waterloo   Waterloo, ON
Honours Bachelor of Software Engineering   Sept 2020 – Apr 2025
- Coursework: OOP in C++, Compilers, Algorithms, Operating Systems, Data Structures, Database Management

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, HTML, CSS, SCSS, SASS, Python, C++, C, Java, C#, C Shell, Bash, SQL
Frameworks: React.js, Angular.js, Vue.js, Backbone.js, Django, Node.js, Express.js, Spring Boot, Flask, Selenium
Technologies: Redux, PostgreSQL, MongoDB, GCP, Terraform, AWS S3, Docker, Scarpy, Git, Jest, Linux

PROFESSIONAL EXPERIENCE

Nokia   Ottawa, ON
Frontend Developer   Sep 2022 – April 2023
- Collaborated with Developers, UX Designers, and Product Teams using agile methodologies to refine services, develop, and test products for the Nokia's Network Service Platform (NSP), which generates **billions of dollars**.
- Established **new repository** featuring a model-driven info panel built with **React**, abstracting the foundational rendering architecture, empowering developers to manipulate the component exclusively through data models.
- Implemented an advanced filter component using **React** and **Javascript**, streamlining frontend object model creation for developers, allowing high level of filter customization.
- Spearheaded development and design of new chart components for resource manager app using **React**, **JavaScript**, **HTML**, and **CSS** increasing versatility in data visualization; demoed team wide and to stakeholders.
- Refactored and designed new search filtering components improving responsiveness and efficiency by **35%**.

Citylitics   Toronto, ON
Software Developer   Jan 2022 – Apr 2022
- Developed software solutions to deliver predictive intelligence on local utility and public infrastructure markets.
- Leveraged **Python**, **Scrapy**, **GCP**, and **RabbitMQ** to script and optimize a web crawler pipeline, resulting in an increase of **300,000+** files retrieved per crawl and annual reduction of cloud storage costs by more than **$100,000**.
- Utilized **React**, **Redux**, **JavaScript**, **HTML**, and **CSS** to enhance market portfolio data extraction – improving productivity with the Intelligence and Product Teams.
- Built internal tools and **REST API** to automate administrative tasks using **Django**, **Django Rest Framework**, and **MySQL**, facilitating effortless extraction of pertinent customer data.
- Wrote unit and integration tests using **Python** and **Pytest** thereby increasing overall test coverage to **100%**.

Schedulock   Toronto, ON
Software Developer   May 2021 – Nov 2021
- Collaborated in a team of developers to orchestrate the migration of Schedulock's real estate management software from **PHP** to **React** and **Spring Boot**– increasing overall performance and enhancing platform scalability.
- Refactored core components/features such as sale reports, employee monitoring dashboards, and listing pages with **React**, **JavaScript**, **CSS**, and **Bootstrap** increasing rendering performance by **2x**.
- Devised an automated report generation system using advanced filters and complex SQL queries, effectively mapping trends and statistics from a **MySQL** database.
- Enhanced the efficiency of high traffic **REST API** endpoints by implementing **caching** with **Java**, **Spring Boot**, and **AWS S3**, resulting in improved response times and performance.

PROJECTS

MicroComputers | *React, Redux, JavaScript, Django, Django Rest Framework, Python, MySQL, HTML, CSS*   ⌨
- Built e-commerce application for computer electronics allowing users to create/login an account, add items to cart, view cart from previous session, checking out, searching for items, etc. within a modern UI.

Mini C Compiler | *C++, MIPS Assembly*   ⌨
- Implemented a compiler for a subset of C which included a scanner using Maximal Munch tokenization, LR(1) parser with parse tree generation, semantic analyser featuring context-sensitive type verification, MIPS code generator, MIPS assembler, and linker.