

Muhammad Zaman

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Skills

Languages: Python, JavaScript, C, C++, C#, Java, TypeScript, HTML/CSS, MySQL, R

Technologies: Pandas, TensorFlow, MongoDB, Express, React, Angular, Node, Firebase, Spring Boot, JWT, ASP.NET Core

Education

University of Waterloo

Waterloo, Canada

Bachelor of Computer Science, Minor in Statistics

Expected Graduation: 2024

- Coursework: Object-Oriented Software Development (**C++**), Algorithm Design & Data Abstraction (**C**), Statistics (**R**)

Experience

Achievers Inc

Toronto, ON (Remote)

Software Developer Intern

May 2022 - Aug 2022

- Developed an internal **React** component library with **25+** standardized components to ease front-end development
- Migrated external dependencies such as **Material-UI** out of the library by rewriting components which decreased load time by **8%** and made it easier for the architecture team to stage and deploy the library to production
- Completed a wide variety of **30+** Jira tickets ranging from resolving bugs to creating independent components such as Icon and Checkbox Group, and had written documentation about their function and utilization
- Ensured the library met the **WCAG 2.1** Web Accessibility standards by adding ARIA labels with proper tab indexing to components and testing their accessibility with JAWS and NVDA screen readers
- Met the **80%** coverage threshold of **JavaScript** unit testing by writing **50+** React unit tests to affirm expectations

SPARK

Fremont, CA (Remote)

Software Developer

July 2021 - April 2022

- Created a multiple choice quiz section using **ASP.NET Core** as the back-end for handling the logic related to determining quiz results, and an **SQL** database for storing the questions which were used in **800+** quizzes taken by students
- Authenticated **200+** student accounts to access quizzes using **ASP.NET Core** with **C#** to validate credentials
- Set up automated emails which sent **2000+** emails to student accounts confirming registration, quiz results, etc.
- Developed a user-friendly front-end using **React** and **Bootstrap** to educate **500+** children in developing countries
- Reduced load time by **17%** by code-splitting, utilizing CDNs, minifying code, and removing unnecessary plugins
- Addressed previous **UX/UI** design issues and standardized all design outputs with a mobile-first approach which increased the satisfaction rate of survey respondents who accessed the website through mobile by **29%**

CrowdDoing

San Francisco, CA (Remote)

Data Scientist Intern

May 2020 - Aug. 2020

- Collected data of **65+** herbs from different sources including the National Library of Medicine using data crawling techniques through **Python** with libraries such as **Scrapy** and **Beautiful Soup**, to provide data to the analytics team
- Processed and cleaned **35+** unstructured data sets through libraries such as **Pandas** and **NumPy** for standardization
- Applied cluster analysis techniques such as **K-means clustering** to classify **100+** items into nutrient categories
- Assisted in the development of a recommender system to suggest items based on user interaction with clusters
- Constructed the end-to-end system using **TensorFlow** for covering the entire stack from efficient serving with **ScANN** for retrieval, through ranking with **TF ranking**, to post ranking, while leveraging multitask learning in the process

Projects

Forex

Full-Stack MERN app featuring a discussion form that allows for P2P Currency Exchange

December 2021

- Created a chat using **Firebase** which allows for unlimited messaging where users are asked to establish direct trade
- Utilizes Fixer.io's API to display real-time exchange rates for **170** currencies as recommendations on the dashboard
- Uses **MongoDB** to store login credentials as well as **Express** to facilitate the creation of a user authentication server
- Web application uses **JWT** signature verification to keep the user logged in to retain access to the API and chat
- **React**-based front-end is focused heavily on design and uses frameworks like **Tailwind CSS** and **PostCSS**

Citadel Data Open

Report about how investments in businesses and education affect traffic

July 2021

- Cleaned and structured multiple provided and external data sets with **1000000+** entries and used that data to come to statically significant conclusions about congestions in New York, NY, Austin, TX, and Washington, DC
- Graphs are generated using the **Python** libraries **Plotly** and **Seaborn**, and the data is organized using **Pandas**
- Analyzed publicly available data on 311 calls, building permits, business licenses, population education levels by drawing correlations to traffic congestion statistics and justifying it with reasons for causation

Employee Manager

Full-stack CRUD application that allows managers to store information about employees

June 2022

- Utilizes **Spring Boot** in **Java** on the back end to handle the logic related to managing employee data which is stored in the **MySQL** database, along with **Angular** in **TypeScript** and **Bootstrap** in the front end for the UI
- REST controller is used for building the **REST API** which uses HTTP requests to access and use data from the server
- Utilized **Spring Data JPA** to effectively develop the persistence layer to communicate with the **MySQL** database