

# SYED WAJIH RIZVI

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University of Waterloo | B.A.Sc. in Mechanical Engineering with Minor in Computing | Class of 2023

## PROFESSIONAL SUMMARY

Full-Stack developer with experience building scalable applications using React, Typescript, NodeJS, and Django. Proficient in designing RESTful APIs integrated with relational and non-relational databases, implementing responsive front-end components, and optimizing backend services for performance. Adept at leveraging Python for automation testing, ensuring reliable and efficient software solutions.

## RECENT PROJECTS

### GameCom | ReactTS, NodeJS, MongoDB

2024

- Developed a web platform providing detailed information on **millions** of video games leveraging **React (Typescript)**, **Node.js**, and **MongoDB**
- Build and optimized **RESTful API** endpoints with **Express.js**, achieving 70% faster response times by streamlining CRUD operations and query performance
- Connected to **MongoDB** using **Mongoose**, implementing asynchronous queries and optimizing database operations to improve load times
- Utilized **React Query** to implement **infinite queries**, cache API responses, and reduce network usage by **90%**
- Designed fluid, responsive animations using **Framer Motion**, enhancing user engagement and delivering modern UX
- Developed custom **React Hooks** for efficient data fetching from IGDB, resulting in **real-time** updates
- Implemented **JWT-based authentication** to secure restricted endpoints ensuring robust protection against unauthorized access

### CScape | ReactTS, NodeJS, MongoDB, Python

2024

- Built a website that provides information on **millions of cities worldwide**, enabling users to plan customized tourist trips
- Integrated **Google Places API** to fetch real time data on destinations, including restaurants, hotels, and amusement parks
- Developed reusable, highly performant React components using **MaterialUI**, ensuring a seamless user experience
- Leveraged **OpenWeather API** to display live weather data and 7-day forecasts for any city
- Utilized **Zustand** to manage global state efficiently, preventing **prop drilling** and improving **component scalability**
- Integrated **OpenAI's API** to dynamically generate city descriptions, enhancing user engagement with personalized content
- Designed a scalable **MongoDB** schema with optimized queries using **Mongoose** for fast and efficient data retrieval
- Implemented **JWT-based authentication** to secure user login and restrict access to certain CRUD operations
- Used **Google's Distance Matrix API** for an optimized **Traveling Salesman algorithm**, reducing travel time and distance
- Developed a responsive layout compatible with mobile, tablet, and desktop devices, ensuring accessibility across platforms

### Apple iPhone 16 Showcase | ReactTS, HTML, CSS

2024

- Developed interactive iPhone models using **ThreeJS** which could be modified based on size, color, and variant
- Utilized **Vanilla Javascript** to build video carousels with beautifully animated progress bars and proper control buttons
- Improved performance by nearly **60%** through a reusable responsive image component that dynamically rendered optimized images based on screen width
- Utilized **GSAP** to build seamless animations and transitions for visually appealing user interface

## WORK EXPERIENCE

### Ford Motor Company | FNV4 Lead Software Automation Engineer

2023-Present | Kanata, ON

- Developed and managed over 900 total test cases using **Python's Slash Testing Framework** that adhered to software release requirements which covered multiple cloud connectivity components for Ford's FNV4 Vehicles
- Streamlined dozens of **Jenkins** Pipelines for multiple components which covered functional, integration, and hardware tests
- Maintained a component code coverage of over **90%** and a branch coverage of over **95%** on all product code
- Provided **100% rainy day** coverage across all testing requirements
- Reduced code duplication to **under 2%** across multiple components with nearly 50K total lines
- Automated system level tasks with Python to interact with the Linux environment for improved productivity
- Worked with **ara.Com** library to utilize proxies in test cases as well as mock skeletons to perform several test scenarios
- Managed test case information and tracked results with **TestRails** and followed appropriate defect lifecycle using **JIRA**

**Ford Motor Company | Embedded Bluetooth Software Automation Engineer**

*2021-2023 | Waterloo, ON*

- Developed test cases that covered various Bluetooth protocols using **Python's Slash Testing Framework**
- Programmed unit tests in Python to mock several API calls and ensure a minimum **90%** code coverage
- Optimized Jenkin nodes to improve Sanity run time by nearly **28%**
- Developed **APIs** and **CLI** tools that provide several text analysis methods for log files
- Debugged automation scripts through log files, breakpoints, and **GUI** inspection
- Utilized **Appium** to conduct automation tests and analyze **android** applications