


Sohail Hameed

COMPUTER SCIENCE | SOFTWARE ENGINEER

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 sohailhameed.me

EDUCATION

University of Toronto

Honors B.Sc. Computer Science

SEP 2016 - NOV 2021

cGPA 3.57/4.00

Courses: Data Structures, Algorithm Design and Complexity, Parallel Programming, Operating Systems, Machine Learning, Databases

SKILLS

Languages:

Proficient: C/C++, Python, JavaScript/TypeScript, Java, SQL/NoSQL

Prior experience: HTML/CSS, C#, Ruby

Technologies/Frameworks:

Proficient: Git, Docker, NodeJS, MongoDB, Angular, Bash, Flask, Django

Prior experience: React, Rails, Kubernetes, OpenMP, MPI, CUDA

WORK EXPERIENCE

Qualcomm | Software Engineer - Video Analytics & Processing Team

SEP 2019 - PRESENT

- Developed a Metadata Manger for the Snapdragon Video Post Processing library in **C/C++** enabling the library to unify how all metadata is handled in the video post processing pipeline
- Redesigned the Software Stack** for the Application Estimation Modeling (AEM) Tool and Viewer to make the system more organized and efficient
 - Designed a new **database schema** in **MongoDB** resulting in **5x times better performance** than the old CouchDB instance
 - Developed **Python** functions/classes to effectively manipulate server side data with **Panda & NumPy**
 - Implemented **RESTful APIs** in **Flask** and an **Angular & plotty.js** based website that allows user to access data from the AEM server side and manipulate that data into graphs and other info graphics

Citi Group | Technology Summer Analyst - Rate Trader Desktop

JUN 2019 - AUG 2019

- Developed the UST Covariance Hedge Ratio Grid in **Angular** to replace its deprecated WPF/C# counter part
- Implemented a **data enricher** for the UST Covariance Hedge Ratio Grid using **Rxjs & TypeScript** to process and handle a **data chain of 20,000+ records** without impeding the grid's or server's functionality
- Created event handlers for the grid-to-grid messaging system to allow for the UST Covariance Hedge Ratio Grid to respond to changes in associated grids
- Gathered user statistics and created **JavaScript/PowerShell scripts** to convert user config data and migrating users from **20+ WPF/C#** Trading Grids to their **Electron/Angular** based counter parts.

University of Toronto | Full Stack Web Developer - DCS Projects

MAY 2018 - AUG 2018

- Developed 5 new features for the Programming Classroom Resource System using **Django** and other web technologies
- Updated the main UI using **JavaScript** and **HTML Canvas** to a new graph-based system, which enabled instructors to create exercises and link them via dependency lines, resulting in a more intuitive user experience
- Implemented **GET & POST APIs** integrating the user facing components for the new UI to the Backend

PROJECTS

AI-Eat-Green

OCT 2019 - FEB 2020

<https://github.com/Karl-Cui/ai-eat-green>

Angular | Ionic | Python | AI | Azure

- A behaviorally informed mobile application that searches for environmentally-friendly recipes and ingredients, provides the "sustainability scores" for recipes based on greenhouse gases emissions, and land and water usage, and tracks the sustainability of one's long-term dietary pattern

🏆 Achieved **Top 25** in the Agorize - AI for Societal Impact Challenge

Virtual Mystery

SEP 2018 - MAY 2018

<https://github.com/utmandrew/virtual-mystery>

Django | PostgreSQL | Angular | Python | Docker

- Developed a Web Application where student from an undergraduate anthropology course complete assignments in groups, can study virtual artifacts and participate in discussions

🏆 Presented the project at the 2019 **University of Toronto Teaching & Learning Symposium** and **Digital Humanities and Computational Sciences Conference**, discussing the projects usage as an Online Spaces for Collaborative Active Learning in Large Classes