

Syed Jafer Haider

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Skills

C, C++, Python, SQL, bash, PowerShell, C#, Javascript, React, node.js, Java, Racket, ASP.NET, Git, Linux

Experience

Undergraduate Research Assistant

University of Waterloo - Cheriton School of Computer Science

Waterloo, Ontario

September 2019 - Present

- Implementing a set of atomic fence operations in **Cv** to control compiler and **x86/ARM** hardware code movement to prevent sequential code optimizations from invalidating concurrent programs

Data Science Intern

Vida Health

San Francisco, California

May 2019 - August 2019

- Increased engagement and user outcomes by designing and building a recipe recommendation pipeline in **Python** using a hybrid implementation of **content-based** and **collaborative filtering** models
- Leveraged **BigQuery** and **Split** to clean, refine, and analyze data to assess and compare the value of **gradient boosting** and **random forest** models
- Improved performance of primary prediction pipeline by 50% through parallelization and code deduplication

Mobile Developer Part-time Intern

National Logistics Services

Mississauga, Ontario

September 2018 - December 2018

- Redesigned visitor management app in **React Native** to decrease sign-in times by 50% and solve rush hour bottleneck
- Implemented internal shipment tracking in **ASP.NET** to allow clients to track orders online

Software Developer Intern

BMO Capital Markets

Toronto, Ontario

January 2018 - April 2018

- Built **C# WPF apps** for tradefloor employees to replace Excel with streamlined, resource-efficient workflows
- Connected **ASP.NET** and **Oracle SQL** to develop web apps to aid employees with common financial calculations when bidding in treasury auctions
- Developed a **pub/sub infrastructure** in **C#** and **SQL Server** to enable async bulk trading to improve efficiency

DevOps Engineer Intern

Camis Inc.

Guelph, Ontario

May 2017 - August 2017

- Created a web dashboard using **React** and **Node.js** to enable field employees to monitor clients remotely
- Initiated and launched a company-wide source control branching strategy involving migration from TFS to Git

Projects

Meal Recommendations (git.io/JesuK) — Content-based model that creates user profiles to recommend food

- Constructs **ingredient matrix** of each meal to determine user ingredient preferences using user ratings

web-msngr (git.io/Jesui) — Real-time personal messaging web application created using the MEAN tech stack

- Uses **sockets**, **NoSQL** to store and communicate between users through an **Angular** front end

WLP4/C++ Compiler — Assembler, Parser, Type-checker, and Code Generator of a C++ subset called WLP4

- Implemented **complete code generation** from WLP4 to MIPS allowing full compilation of WLP4

TV Recommendations (git.io/JesuX) — Mathematical model that uses IMDB, Metacritic to recommend TV Shows

- Calculates **cosine similarities** by combining show features into one **TF-IDF** vector to recommend TV Shows

Education

Candidate for Honours Bachelor of **Computer Science**, BCS

Candidate for Honours Bachelor of **Business Administration**, BBA

University of Waterloo, 2016 - 2021

Wilfrid Laurier University, 2016 - 2021