HASAN ALTAF



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TECHNICAL SKILLS

Programming	Web + Database	Data Analysis	Tools/Libraries/Frameworks
Java / C#	JavaScript/TypeScript	Pandas / NumPy	Git
Python	React.js	Tableau	JUnit Testing
C++	Firebase	Microsoft Excel	Agile Development

EDUCATION

University of British Columbia

Combined Major in Computer Science and Business

Expected Graduation: May 2023 Cumulative GPA: 4.0/4.0 (90% Average)

- Ranked among the top 10 in a faculty of over 700 students
- Academics: Software Construction JAVA OOP (A+), Data Structures and Algorithms (A), Models of Computation (A+)

WORK EXPERIENCE

University of British Columbia

Undergraduate Teaching Assistant

Vancouver BC, Canada

Sep 2020 – Present

- Teaching Assistant for CPSC 221 (Basic Data Structures and Algorithms) taught in C++
- Communicating the design, analysis, and justification of fundamental data structures and algorithms

BC Hydro

Burnaby BC, Canada

Jun 2019 - Aug 2019

Procurement Analyst Intern – Generation Infrastructure Projects Team

- Analyzed financial feasibility using Python and Excel to provide cost-reduction strategies, saving over \$500,000
- Led the revamp of the Indigenous Selective Procurement Strategy for BC Hydro Project Procurement
- Prepared RFP documents and contracting plans for projects up to \$15,000,000

TECHNICAL PROJECTS

GroUber – Carpool Router (7)

Aug 2020

- Engineered a carpool scheduling web-application using React.js, TypeScript, Node.js and Cloud Firestore database
- Spearheaded the development of solving the NP-hard problem of carpool routing using heuristic techniques
- Implemented API's from Google Maps and Radar.io to calculate and visualize routes and distances

Forex Arbitrage Detector

Jul 2020

- Java application that parses real-time currency pairs pricing data from an API and detects arbitrage opportunities
- Implemented a graph through an adjacency list with the Bellman-Ford Algorithm detecting negative weight cycles
- Integrated object-oriented design principles throughout the application to increase cohesion and scalability

Sendex – Chat Application 🔽 🗹

Jul 2020

Built a real-time Chat Application with React.js and Firebase, including authentication, hosting and Cloud Firestore database

Sorting Algorithm Visualizer

Jun 2020

- Used C# to create a windows forms application with an interactive user interface to visualize sorting algorithms
- Applied Object-Oriented Design Principles to implement selection sort, insertion sort, merge sort and bubble sort

ADDITIONAL EXPERIENCE

Microsoft TEALS Teaching Assistant Vancouver BC, Canada

May 2020 - Present

- Teaching Assistant for the Intro to Computer Science Course for high school students
- Communicating various programming concepts to underserved students in the Burnaby Youth Hub Community Center

Redesigned the organization's website from scratch using Gatsby.js, increasing Lighthouse performance score by 185%

WestPeak Research Association

Vancouver BC, Canada

Technology Coordinator

Jul 2020 - Present

Website content can now automatically update based on changes to Excel spreadsheets and markdown files