

DAVID KHAZZAM

Software Developer | 3rd Year Student

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EXPERIENCE

Kinaxis

Algorithms Developer

Sep 2020 - Dec 2020

- Revamped a **C++** tool to detect and display **70+ supply-chain inefficiencies** in a user-friendly format, providing new avenues for resolving key problems
- Leveraged **NLP** and **Flask** to scrape social media, using interactive **Plotly** visualizations to display the effects of public sentiment on future demand
- Implemented a **new form of data caching**, making data retrieval **3x** faster

Web Application Developer

Jan 2020 - May 2020

- Currently a finalist for University of Waterloo's Co-op Student of the Year
- Built **30+** reusable and responsive **React** components, leveraging **Redux**
- Practiced **test-driven development** to unit test components utilizing **Jest**, **Jasmine** and **TestCafe**, improving test coverage to over **97%**
- Took initiative to establish help resources and tutorials for new employees
- Routed data using **10+** **RESTful API** endpoints from **C#** server

Agriculture and Agri-Food Canada

Knowledge Graph Developer

Apr 2019 - Aug 2019

- Created **Python** scripts and **SPARQL** queries to clean and organize over **20,000** botanical species' data into practical formats
- Created, implemented and stored knowledge graphs in a database on an **AWS Metaphactory** platform, facilitating user interactivity
- Built **5+** interactive visualizations using **R** and **D3.js**, enabling botanists to develop **new insights** and understandings of plant species
- Used **Machine Learning** and **Data Mining** to identify new correlations

PROJECTS

Optimo Vision Analyzer

StarterHacks | 1st Place, over 500 participants

Jan 2019

- Implemented **voice recognition** software using **Web Speech API** in addition to **HTML**, **JavaScript**, and **CSS** to allow a website to process and respond to a user's input, as well as **dynamically adjust** to varying screen-sizes

Bit by Bit

Hacking Health Ottawa | 1st Place, over 100 participants

Jun 2019

- Won **10,000\$** of support from the **Algonquin College Centre for Innovation**
- Collaborated to design an app to help recovering patients track their fitness

C++ Compiler

University of Waterloo | Top Grade, over 500 students

May - Aug 2020

- Coded in **C++** and **MIPS** to create a **complete end-to-end compiler**
- Created an **Assembler**, a **Scanner**, a **Context Sensitive Analyzer** and a **Code Generator** for the **C++** language, passing **99.97%** of test cases
- Optimized compiler to be in the **top 1%** of the **most efficient** submissions

trEcho

uOttahacks³ | Top 20, over 400 participants

Feb 2020

- Leveraged **Google Map API** and **AWS Lambda** for Amazon Echo
- Employed algorithm on a **Flask** app to cache package's location, **drastically** reducing stress of over **30 million** daily requests on the delivery system

SKILLS

Programming Languages

C++

Python

React & Redux

Typescript

C

JavaScript

SPARQL

Java

Scheme (Racket)

Tools and Technologies

Git

Jest & Jasmine

Bash

Unix/Linux

Windows

MIPS

HTML

CSS

Shiny

EDUCATION

Candidate for Bachelor of Honours Computer Science

University of Waterloo

2018 - 2022

- President's Scholarship of Distinction (97.3% entrance average)
- GPA: 3.9/4.0

RELEVANT COURSES

- Operating Systems (W21)
- Algorithms (W21)
- Data Structures and Data Management (S20)
- Object-Oriented Software Development (F19)

LANGUAGES

English

French

Spanish



HOBBIES & EXTRACURRICULARS

Varsity Quidditch Captain

Acapella

Strategy games aficionado

Math Society Office Manager