DAVID KHAZZAM

Software Developer | 3rd Year Student

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EXPERIENCE

Kinaxis

Algorithms Developer   Sep 2020 - Dec 2020

- **Revamped** a 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 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

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

uOttaHacks[3] | 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

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**

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**

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

- Object-Oriented Software Development
- Data Structures and Data Management
- Foundations of Sequential Programs
- Computer Organization and Design

LANGUAGES

English   ●●●●●
French   ●●●●●
Spanish   ●●●●○

HOBBIES & EXTRACURRICULARS

- Varsity Quidditch Captain
- Acapella
- Strategy games aficionado
- Math Society Office Manager