

ANDY REN

Computer Engineering at University of Waterloo

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EXPERIENCE

Software Developer

VirtaMove

September 2019 – Present

Kanata, Canada

- Built new features for the VirtaMove V-Migrate and V-Maestro migration software using **C#** and **.NET Core**
- Constructed exception handling methods to resolve software installation and Windows registry key issues, and mitigate run-time race-conditions using **C++**, **WinAPI** and **WiX Toolset**; reducing application migration issues for customers
- Automated **V-Migrate** release-critical manual migration tests using **Python**, **Robot Framework**, and **TestStack.White**; increasing testing efficiency by 50%

Web Analyst

Agriculture and Agri-Food Canada (AAFC)

January 2019 – April 2019

Ottawa, Canada

- Developed innovative web solutions using **JavaScript**, **HTML** and **CSS** for intra-departmental clients on the AAFC SharePoint platform
- Constructed string search/scrape methods in **PowerShell** with use of the **SharePoint API** to increase functionality for scripts that generated reports on departmental **SharePoint** usage statistics
- Communicated with clients regularly to build practical, maintainable solutions and ensured that sensitive information was properly handled per the **Access to Information Act** and **Privacy Act**

PROJECTS

CareerCounsel

github.com/ren-andy/cuhacking-app

February 2019

CUHacking 2019

- Developed a **ReactJS** web application for CUHacking 2019 that retrieves **Indeed** listings using a **JSON string parsing/scraping algorithm** that summarizes job postings based on user inputted search parameters
- Built an **Express.js** server using **Node.js** to enable server-side script execution and **CORS** proxying

polycalc.js

github.com/terraglacium/polycalc.js

February 2019

- Built a calculator that converts string polynomials of the nth power into instances of objects usable for polynomial operations (i.e add, multiply, differentiation, integration) by a set of **JavaScript** scripts
- Used **Node.js** and **npm** libraries to emulate a CLI user interface

SUMMARY

- Proficient experience with scripting and object-oriented programming languages (**C++**, **Python**, **JavaScript**)
- Practical experience with micro-controllers and HDLs (**Arduino**, **VHDL**)
- Interest in embedded systems, healthcare, biotechnology, and Internet of Things

SKILLS

Languages

Python C++ JavaScript C#
PowerShell VHDL

Frameworks and Tools

Robot Framework .NET Core ReactJS
Node.js Arduino SharePoint

ACTIVITIES AND SOCIETIES

-  **Engineering Student Councilor**
Elected to advocate for and represent the interests of Faculty of Engineering students at the **WUSA** Student Council

-  **Lifelong Musician**
Played **Piano**, **Alto Saxophone**, and **Mallet Percussion** throughout primary and high school

EDUCATION

Candidate for BASc, Computer Engineering

University of Waterloo

September 2018– Present

- Expected Graduation – May 2023