

ANDY REN

Computer Engineering at University of Waterloo

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EXPERIENCE

Software Developer

VirtaMove

September 2019 – December 2019 Kanata, Canada

- Built a robust internal test framework for VirtaMove using **Python**, **Robot Framework**, via implementation of automation scripts that executed release-critical manual tests, increasing software testing and verification efficiency by up to **50%**,
- Developed custom error handling implementations in **C++** to resolve V-Migrate installation and run-time related registry bugs using the **Windows API** and **WiX Toolset**
- Redesigned generation of migration agent identifiers, enabling V-Maestro to communicate with previously linked agents after a system reboot, which improved scalability
- Prototyped a new product activation GUI for migration licensing using **C#**, **.NET Core**, and **C++**

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

helper-goose

github.com/ren-andy/helper-goose

December 2019

- Built a **Python** Reddit bot that responds to posts found on the **/r/uwaterloo** subreddit with kind messages or comments containing relevant information obtained via the **UWaterloo API** (e.g course codes, weather, etc)

CareerCounsel

github.com/ren-andy/cuhacking-app

February 2019

CUHacking 2019

- Developed a **React** web application for CUHacking 2019 coupled with an **Express.js** backend that retrieves **Indeed** and **Github** job postings based on user inputted search parameters, and classifies them by levels of education and experience

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 React
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