

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

taylorpolynomial.py

github.com/ren-andy/taylorpolynomial.py

December 2019

- Taylor polynomial** generator & grapher of various mathematical functions to the nth order, written in **Python**
- Utilized **matplotlib** and **numpy** to implement a graphing UI, and **mpmath** for math calculations.

CareerCounsel

github.com/ren-andy/cuhacking-app

February 2019

CUHacking 2019

- Developed a 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, coupled with a **React** front-end website 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 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