

Roy Kim

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EDUCATION

Western University

London, ON

Bachelor of Science in Computer Science (GPA: 3.7)

Graduation Date: April 2022

- Relevant Coursework: Data Structures & Algorithms, Object-Oriented Design & Analysis, Information Systems & Design, Analysis of Algorithms, Linear Algebra, Databases, Networks.

WORK EXPERIENCE

Canada Revenue Agency

Ottawa, ON

IT Developer

May 2020 – Present

- Designed and built Broadcom API gateway infrastructure for high scalability and availability for critical API's. Integrated OAuth with internal IAM and collaborated with engineers to implement policies and assertions.
- Developed and automated health checks for Linux virtual machines by replacing manual verification with scheduled Bash scripts, saving 45 minutes daily.
- Reduced the time to modify user accounts from 20 minutes to 5 minutes by building a Python CLI app to extract bulk CSV data, compose LDIF files, and execute changes to the LDAP server.
- Created an inventory of 80 virtual machines using Python Pandas to compile packages installed and track product end of life cycles to avoid prolonged outage periods.
- Led the implementation of an internal Git repository to store 200 in-house scripts and documents which improved the collaborative workflow of 30 developers.

Connect-IT

London, ON

Connect-IT Consultant

April 2019 - April 2021

- Maintained and debugged detailed tickets regarding user issues and completed in-room troubleshooting, resulting in a reduction of support calls by 20%.
- Improved the in-house network monitoring tool by implementing alerts for exceeding specific thresholds, resulting in more timely identification of issues.

Projects

MechMarket Inventory

- Developed a Python bot to scrape and compile subreddit (r/mechmarket) listings using the Reddit API and Python's Request library.
- Constructed an algorithm to format and itemize raw listing data to store in a MySQL database.
- Implemented product pricing graphs to visualize trends with a DataFrame plot from Python Pandas.
- Developed a product monitoring system which queries the database for the latest pricing information.

Classroom Attendance

- Developed a C++ tool to record attendance in university classes. Aimed to help busy professors document the independent participation of each student.
- Leveraged the Raspberry Pi's wireless features to scan for bluetooth devices using Linux libbluetooth-dev and blueZ libraries to "check-in" students.
- Compiled student bluetooth MAC addresses into a MySQL database to generate individual student reports.

UDP Client & Server

- Developed a Python UDP Server and Client to send and receive data by creating an open socket.
- Implemented the creation and verification of UDP data packets by using Python's hashlib to pack and unpack acknowledgement, sequence, and checksum values.
- Improved reliability with Python unit tests to prevent network delay, network loss, and corrupt checksums.

SKILLS & INTERESTS

Programming Skills: Python, Java, C, C++, Javascript, SQL, PHP

Other: Git, NodeJS, React, HTML, CSS, Linux, Bash, MySQL, Requests, Pandas

Interests: Automation, Bouldering, Devops, Guitar, Mechanical Keyboards, Puzzles, Rubik's Cubes, Watches.