


Denise Tsui

University of Waterloo, Mechatronics Engineering, BAsc.

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Summary of Qualifications

- Bachelor of Applied Science in Mechatronics Engineering, Computing Option, from the University of Waterloo
- Familiar with version control (Git), project tracking (Jira, Azure DevOps), Agile, CRM (Dynamics 365), data visualization (Power BI)
- Strong programming in Python from coursework including pattern recognition, robot path navigation, and neurobiological systems
- 1+ years working with cross-functional teams, collaborating with stakeholders and coworkers
- Detailed approach to understanding business product specifications from previous experiences working in QA
- Managed 2 term-long course projects - organized meetings, set internal milestones, and contributed to all stages of technical design
- Currently strengthening skills in data analytics and visualization (SQL, Tableau, R, Power BI) on DataCamp

Skills

Languages Python, C/C++, MATLAB, Rust, SQL, XML, JSON, VBA

Tools Dynamics365, Power BI, Jira, Confluence, Azure DevOps, Git, Jenkins, Simulink, ROS2, Linux

Work Experience

QA Automation Developer (Coop)

Sept 2022 – Dec 2022

Imagine Communications

Remote

- Developed and regulated **VBScript** automation scripts in Micro Focus UFT One to perform strategic testing of the Networking and Distribution product line
- Configured **Jenkins** testing pipeline with **Batch** and **Python** scripts on multiple **VM** environments for execution of overnight testing
- Evaluated functional and compliance requirements, tracked progress in **Jira**, and utilized **Bitbucket** for version control of codebase

Control Systems Software Designer (Coop)

Jan 2022 – Apr 2022

ATS Automation Tooling Systems Inc.

Cambridge, ON

- Programmed Allen-Bradley **PLC** to integrate six-axis robot and FESTO IO-Link system with RSLogix5000 and FactoryTalk View
- Conducted **Proof of Principle** testing of various station concepts to improve robot, tooling, and design implementations
- Optimized, modelled, and analyzed robot motion of **SCARA** and **six-axis robots** with custom end effectors in EPSON RC+ simulation
- Collaborated with customer, project managers, designers, engineers, and toolmakers to achieve a functional automation system

Microsoft Dynamics 365 Analyst (Coop)

May 2021 – Aug 2021

Digitalembbrace Inc.

Remote

- Developed **CRM** customizations in **Dynamics365** environment for client projects, using **Azure DevOps** to track progress
- Synthesized business data entities and attributes in D365 environment to produce intelligible reports via FetchXML and **SQL** queries
- Updated existing **XML** code in SharePoint Designer to provide ongoing technical and bug fix support for client webpage solutions
- Administered **data migration** solution for mass data from CRM 2011 to D365 using the KingswaySoft SSIS Toolkit in **Visual Studio**

Quality Assurance Systems Tester (Coop)

Sept 2020 – Dec 2020

MedAvail Technologies Inc.

Mississauga, ON

- Tested software, hardware, and UI in all stages of development for a self-serve pharmacy kiosk and accompanying mobile app
- Identified and reported defects in **Azure DevOps** ticketing to developers in preparation for product releases to meet clients' needs
- Performed extensive testing of QR code mobile app workflow with **JSON** to ensure accurate and reliable product

Projects

Organics Waste Processing Device

Sept 2023 – Apr 2024

- Integrated PTC (Positive Temperature Coefficient) heaters and blending mechanism to process organics waste for high-rise residents
- Designed a safe and functional system that interfaces temperature, humidity, and air quality sensors to **Arduino** controller

Mobile Robotics Stack

Sept 2023 – Dec 2023

- Implemented path and trajectory planning using Extended Kalman Filter for localization of TurtleBot4 robot with **Python**
- Processed real-time sensor data from LiDAR, IMU, camera and encoders for closed-loop control using **ROS2** in **Ubuntu** environment