

# Yuwen Lu

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## Skills

- **Programming Languages:** SQL, Java, Python, JavaScript, HTML, CSS
- **Frameworks & Libraries:** Spring Boot, FastAPI, React, Vue
- **Testing & Automation:** Selenium, Cypress
- **Tools & Methodologies:** Git, Docker, Nginx, Scrum, Jira, BitBucket, Confluence, Linux Server

## Work Experience

### Software Test Automation Co-op

### Ocean Networks Canada

*Victoria, Canada. 09/2023-08/2024*

- Supporting 4+ software developers in maintenance team.
- Developed and maintained end-to-end UI automation tests using Selenium and Cypress.
- Monitored Jenkins pipelines, minimizing test failures from nightly integration results of over 300 Selenium test cases.
- Utilized Scrum methodology and tools such as JIRA, Bitbucket, and Confluence for project management and collaboration.
- Enhanced web system functionalities with React, OSGi framework, and PostgreSQL to adapt to evolving requirements.

## Projects

### Personal Website

*10/2023-current*

- Utilized a microservices architecture hosted on Microsoft Azure, running Ubuntu 20.04.
- Frontend developed with React, served via NGINX, using MUI, Framer Motion, React Flow, React Charts.
- Backend services built with Spring Boot, with MySQL for data storage.
- Integrated the [Complex Management project](#) using Docker, serving its frontend via NGINX.
- Automated deployment of the [Learning Journey Hub project](#) using GitHub Actions.
- Managed DNS for [meetyuwen.com](#).

### Laptop Price Prediction with Web Crawling

*05/2023-06/2023*

- Developed a Scrapy-based crawler to extract data from Smartprix.com, gathered a 21.9MB dataset including 2230 laptops.
- Performed data cleaning and preprocessing steps on the raw HTML data segments, transforming them into a structured dataset of 53 features and a price label.
- Implemented preprocessing pipeline and applied decision tree and linear regression models for laptop price prediction.

### Quantum Machine Learning

*01/2023-04/2023*

- Conducted research on Quantum Machine Learning, exploring its history and applications.
- Implemented Quantum convolutional neural networks using PyTorch and Qiskit, achieving 80% accuracy on a dataset of colored images (airplanes and cars).
- Concluded that Quantum Machine Learning holds the potential for improved performance in handling complex tasks.

### Residential Complex Management Website

*01/2022-06/2022*

- Developed the Residential Complex Management Website, adhering to software engineering standards.
- Conducted feasibility analysis, requirements analysis, and detailed system design, creating a relational database with MySQL.
- Designed and developed the back-end with Spring Boot, providing 29 web service APIs.
- Designed and developed the front-end with Vue.js, ensuring compatibility with both mobile and desktop browsers.
- Integrated SMS services for enhanced security and performed system testing, including stress testing with AliCloud's PTS.
- Deployed the project and prepared the project reports documenting the process and outcomes.

## Education

### University of Victoria

Master of Applied Data Science

Victoria, Canada 09/2022-08/2024

### Beijing Union University

Bachelor of Software Engineering

Beijing, China 09/2018-07/2022