

Olivia Yixin Ouyang

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EDUCATION

UNIVERSITY OF WATERLOO - *Bachelor of Computer Science*

Sep 2021 - Apr 2026

SKILLS

Languages: Java, C/C++, Python, JavaScript, HTML, CSS

Frameworks & Tools: Spring, React, Postman, PostgreSQL, Express, Flask, Node, Redux, Git, Angular, JIRA, AWS

WORK EXPERIENCE

OPENTEXT - **Software Developer** - *Waterloo, CA*

Apr 2022 - Aug 2022

- Designed, developed, and tested public **RESTful** APIs through **Java Spring Boot**, **PostgreSQL**, and **OT2 Cloud** within an MVC-based Case Management system
- Implemented critical application features, including edit, delete, and import, export data tables using **Redux**, to increase the system's usability and accessibility
- Developed reusable UI components using **JavaScript (Next.js)** integrated with complex REST APIs to facilitate case organization applications with millions of dependent users
- Wrote high-quality end-to-end and unit tests (over 85% code coverage) with **JUnit**, **Mockito**, and **MockMvc** while also playing an avid role in code reviews and design discussions
- Refactored frontend functions to increase the code maintainability and adaptability to different scenarios

PROJECTS

E-COMMERCE WEBSITE

- Constructed a web application with separated buyer and merchant portals with **React** and **Commerce.js** that supports merchants to add products with pictures and descriptions, set product prices and shipping methods
- Built a user-friendly interface using **JavaScript**, **HTML**, and **CSS** for buyers to view products' images, descriptions, available amount, add to cart button, and view cart button
- Implemented **React-Hook-Form** API with **Commerce.js** for buyers to checkout, enter their personal information, select shipping destination, view order summary, and make payment
- Integrated **Stripe** API that allows users to pay with their credit card and receive confirmation emails

AARDVARK - A WIFI FINDING ROBOT

- Developed an autonomous rover using **Python** and **Arduino** to find spots with consistent connection
- Implemented Wifi module to test the connection strength (RSSI) and created a communication server using **Flask** and **Gunicorn** to measure the network statistics and connection health between Eduroam and Arduino
- Formulated navigation algorithm by taking data from the ultra sensor to perform obstacle avoidance

BATTLE OF CLANS - JAVA-BASED GUI

- Created a user-friendly GUI using **Greenfoot** to simulate a war battle between two clans visually and audibly
- Utilized **Java** to implement classes using **Object Oriented Programming** concepts including multilevel inheritance and polymorphism and enhanced **data structures** and pathfinding **algorithms**