

Houfu Chen

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SUMMARY OF QUALIFICATIONS

- Proficient in QA automation using Python, C#, Selenium, with strong debugging and testing skills.
- Recognized with multiple awards, including President's Research Award, for academic and technical excellence.
- Featured alumni in *Data Analytics & Machine Learning Emphasis* at UofT.

EDUCATION & SKILLS

University of Toronto (UofT)

Master of Engineering in Electrical & Computer Engineering | GPA: 3.83/4.00

Toronto, ON

Sep 2023 – Mar 2025

Emphasis: *Data Analytics & Machine Learning* (as a [Featured Alumni](#))

- Graduate TA for ML and Data Analytics courses; developed projects/tutorials and graded 1,000+ submissions.

University of Waterloo (UWaterloo)

Bachelor of Applied Science in Nanotechnology Engineering (with coop)

Waterloo, ON

Sep 2018 – Jun 2023

- President's Scholarship of Distinction (2018); President's Research Award (2019); Graduated with Distinction

Programming Languages: Python, JavaScript (React/Node.js), C++, Bash, R

Tools: Selenium, WebDriver IO, Postman, LTspice, SonarQube, MS Excel, MS FrontPage, MS Word

Database: SQL, Azure (Data Factory, Databricks)

Frameworks/APIs: LLM APIs, Yelp/Google Places, REST APIs

RELATED INDUSTRIAL EXPERIENCE (4)

Ford Motor Company

QA Automation Specialist

Oakville, ON

May 2022 – Aug 2022

- Optimized TCU performance testing, improving network throughput by 20%.
- Resolved 40+ SSH and Selenium exceptions to increase code health.
- Authored detailed operational guides for future testing.
- Enhanced and maintained CarPlay testing systems and daily tests during the employment.

Imagine Communications Corp

QA-Developer

Waterloo, ON

Jan 2021 – April 2021

- Developed autonomous testing scripts for UI interaction (e.g., clicks, keystrokes), increased testing efficiency.
- Monitored daily server status through automated scripts and UI testing.

Teranet CMS

QA Automation Specialist

Waterloo, ON

Sep 2020 – Dec 2020

- Wrote regression tests with C# under the Selenium framework.
- Optimized test execution times, enhancing overall technical health.

Manulife

QA-Developer

Waterloo, ON

Jan 2020 – April 2020

- Developed and fixed components in web pages using modern (ES6) JavaScript, HTML, and MUX components.
- Wrote BDDs for cross-browser (4 browsers) testing and resolved 9 IE-specific defects.
- Improved code health by addressing 40+ SonarQube issues and achieving 98%+ test coverage.
- Delivered a product demo to 50+ stakeholders, including developers, business analysts, and product owners.

PROJECTS (4+, more on houfu72.com)

LLM and Hardware-Related Projects

- **Emergency Route Planning Tool:** Integrated LLMs with Dijkstra's algorithm and Ant Colony Optimization (ACO) for evacuation routing, outperforming traditional algorithms.
- **Food-Raccoon, a LLM Food Recommendation System:** Developed with Python, Yelp/Google APIs, and LLMs to provide personalized restaurant suggestions. Integrated geospatial APIs to enhance location-based recommendations
- **S.W.I.M (Sequential Wave Imprinting Machine):** Developed an Arduino-based LED system to display images using motion detection and time-lapse photography.
- **Autonomous Robot:** Designed and programmed a LEGO Mindstorms robot for object retrieval; secured 3rd place in a robotics competition.