

Houfu Chen

Mobile: 647-633-9933 Email : houfu.chen@mail.utoronto.ca LinkedIn : linkedin.com/in/houfuchen
Portfolio : houfu72.com GitHub : github.com/chf-NewStart

SUMMARY OF QUALIFICATIONS

- **QA & Automation Engineering:** 4+ years of experience in QA automation. Proficient in debugging, test framework development, and cross-browser testing.
- **Software Development & Testing:** Expertise in developing scalable test automation frameworks, improving execution efficiency, and reducing test failures. Strong experience with BDD, API testing, and debugging.
- **Machine Learning & Data Analytics:** Hands-on experience with LLM APIs, AI-driven testing automation, and data analytics for quality assurance.

TECHNICAL SKILLS

- **Programming:** Python, C, C++, C#, JavaScript
- **Test Automation:** Selenium, BDD, SonarQube, Postman, API Testing
- **Machine Learning & Data Analytics:** LLM APIs, Pandas, NumPy

RELEVANT EXPERIENCE

- **Manulife** Waterloo, ON
QA Developer *Jan 2020 - Apr 2020*
 - **Cross-browser Testing:** Developed BDD test scenarios for 4 browsers, resolving 9 IE-specific defects, increasing compatibility efficiency by 25%.
 - **Code Quality:** Fixed 40+ SonarQube issues, achieving 98%+ test coverage, reducing production defects by 15%.
 - **Stakeholder Demo:** Delivered a product demo to 50+ stakeholders, improving feedback turnaround time.
- **Ford Motor Company** Oakville, ON
QA Automation Specialist *May 2022 - Aug 2022*
 - **TCU Testing:** Executed daily TCU performance tests, increasing test reliability by 10%.
 - **Debugging:** Resolved 40+ SSH & Selenium exceptions, reducing test failures by 20%.
 - **CarPlay Testing:** Maintained test automation, making sure the daily test issues are resolved within 1 day.
- **Imagine Communications** Waterloo, ON
QA Developer *Jan 2021 - Apr 2021*
 - **Automated UI Testing:** Developed automated UI test scripts, improving test coverage by 30%.
 - **Server Monitoring:** Implemented server health checks, reducing manual intervention.
- **Teranet CMS** Waterloo, ON
QA Automation Specialist *Sep 2020 - Dec 2020*
 - **Regression Testing:** Developed Selenium-based regression tests in C#, improving reliability.
 - **Test Optimization:** Optimized execution time through enhanced scripting and debugging.

RELEVANT PROJECTS

- **Emergency Route Planner:**
 - **AI-Powered Pathfinding:** Developed an evacuation route optimization system using LLM, Dijkstra, and ACO algorithms.
 - **Real-Time Adaptation:** Incorporated dynamic risk assessment to adjust routes based on evolving disaster scenarios.
 - **Improved Efficiency:** Enhanced evacuation speed and safety by reducing congestion in high-risk areas.
- **Food-Raccoon:**
 - **ML-Based Recommendations:** Built a restaurant recommendation system integrating OpenAI, Google Maps, and Yelp API.

- **Community Recognize:** Received over 20 claps on Medium.
- **Scalability:** Designed a modular architecture to support additional location-based services.
- **S.W.I.M LED Display System:**
 - **Interactive Visuals:** Designed a motion-triggered LED projection system using Arduino.
 - **Real-Time Engagement:** Enabled user interaction with dynamic light patterns based on movement.
 - **Energy Efficiency:** Optimized power consumption for prolonged operation.
- **Autonomous Robot:**
 - **Object Retrieval:** Developed a LEGO Mindstorms robot capable of navigating obstacles and retrieving objects.
 - **Competition Performance:** Achieved 3rd place in a robotics competition, demonstrating effective navigation and object recognition.
 - **Algorithm Optimization:** Refined control algorithms for improved speed and accuracy.

EDUCATION

- **University of Toronto (UofT)** Toronto, ON
Master of Engineering in Electrical & Computer Engineering *Sep 2023 – Mar 2025*
 - **Teaching Assistant:** TA for multiple Machine Learning and Python-related courses, including MIE370, APS1070, and CSC108, responsible for marking, tutorial instruction, and student support.
- **University of Waterloo (UWaterloo)** Waterloo, ON
Bachelor of Applied Science in Nanotechnology Engineering *Sep 2018 – Jun 2023*
 - **Awards and Honors:** Recipient of President's Distinction Award (2019), President's Research Award (2019), Most Creative Design (2019), Graduated with Distinction (2023, GPA above 80/100)

LANGUAGES

Proficiency in **English** and **Mandarin Chinese**