**Houfu Chen Email:** houfu.chen@mail.utoronto.ca **| Phone:** 647-633-9933

**LinkedIn:** [linkedin.com/in/houfuchen](https://www.linkedin.com/in/houfuchen/)**| Portfolio:** [houfu72.com](https://houfu72.com/) **| GitHub:** [github.com/chf-NewStart](https://github.com/chf-NewStart)

**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**

**University of Toronto (UofT)** Toronto, ON Master of Engineering in Electrical & Computer Engineering | GPA: 3.83/4.00Sep 2023 – Mar 2025

*Emphasis: Data Analytics & Machine Learning (*[*Featured Alumni*](https://gradstudies.engineering.utoronto.ca/master-of-engineering-meng/emphasis-in-analytics/)*)*

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

**University of Waterloo (UWaterloo)** Waterloo, ON Bachelor of Applied Science in Nanotechnology Engineering (with coop) |GPA: 81/100Sep 2018 – Jun 2023

* President’s Scholarship of Distinction (2018); President’s Research Award (2019); Graduated with Distinction

**TECHNICAL SKILLS**

* **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 EXPERIENCE (Explore more experiences in detail at** [**houfu72.com**](https://houfu72.com/#experiences)**)**

**Ford Motor Company**Oakville, ON

*QA Automation Specialist* May 2022 – Aug 2022

* Optimized TCU performance testing, improving network throughput by 20%.
* Resolved 40+ SSH and Selenium exceptions; authored detailed operational guides for future testing.
* Enhanced CarPlay testing systems, boosting efficiency by 30%.

**Imagine Communications Corp** Waterloo, ON

*QA-Developer* Jan 2021 – April 2021

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

**Teranet CMS**Waterloo, ON

*QA Automation Specialist* Sep 2020 – Dec 2020

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

**Manulife** Waterloo, ON

*QA-Developer* 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.

**PROJECT EXPERIENCE (Explore more projects in detail at** [**houfu72.com**](https://houfu72.com/#projects)**)**

**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.