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

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

*Emphasis: Data Analytics & Machine Learning (as a* [*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) *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***Oakville, ON*

*QA Automation Specialist 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** *Waterloo, ON*

*QA-Developer 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***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.

**PROJECTS (4+, more on** [**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.