

YUANLONG CUI

Electrical and Computer Engineering (MEng), University of Toronto

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EDUCATION

UNIVERSITY OF TORONTO

TORONTO, ON, CANADA

Electrical and Computer Engineering
(MEng)

2023 – 2025

UNIVERSITY OF WATERLOO

WATERLOO, ON, CANADA

Mechatronics Engineering (BASc)

2018 – 2023

- GPA: 86.63
- Top relevant courses:
 - ❖ MSCI446: Introduction to Machine Learning
 - ❖ ECE457A: Co-operative and Adaptive Algorithms
 - ❖ CS446: Software Design and Architectures

AWARDS & HONOURS

- President's International Experience Award (2022)
- Dean's Honours List (2019)
- President's Scholarship of Distinction (2018)

SKILLS

LANGUAGES

- JavaScript (Node.js), TypeScript, HTML, CSS
- C/C++, Python, Java

LIBRARIES/FRAMEWORKS

- Express.js, NestJS
- React, Angular, Vue
- Qt/QML

OTHERS

- Git, HTTP, TCP/IP, Redis, PostgreSQL, Jenkins

PROJECT EXPERIENCE

HOUSING PRICE PREDICTOR | Machine Learning Project (UNIVERSITY OF WATERLOO)

January 2023 - April 2023

- ❖ Designed an open-source predictive tool in a team of 4 that uses **supervised learning** to estimate the rent based on key features of a place of residence, which is applicable to over 90 universities across Canada
- ❖ Collected public housing data on the internet using **OpenAI** API, and processed the data using **Python** libraries including **pandas**, **NumPy**, and **scikit-learn**
- ❖ Generated a project report that shows how the ML tool was built and improved and discusses the insight obtained from the research

ROBOFEEDER | Robotics Design Project (ROBOHUB, UNIVERSITY OF WATERLOO)

September 2022 - March 2023

- ❖ Developed a closed-loop control system on **Linux** with **ROS** and **Python** that drives robotic arms to autonomously feed people with disabilities with 95%+ accuracy
- ❖ Presented the project to 8,000+ people by building a website using **React**, making marketing videos using **Davinci Resolve**, and giving live demos to the guests at Waterloo Engineering Symposium 2023

WORK EXPERIENCE

DOZR | Software Engineer (KITCHENER, ON, CANADA)

January 2019 – April 2019

- ❖ Designed and built a user dashboard and a contract-signing platform using MERN stack (**MongoDB + Express.js + React + Node.js**), highly improving UX and contributing to over 80% more user registrations
- ❖ Wrote Node.js scripts for **data processing and analysis** and helped Dozr make marketing decisions intelligently
- ❖ Organized data collections with business mindset and normalized the database accordingly, facilitating data analysis and connecting to customers efficiently

AUTHING | Full-Stack Developer (BEIJING, CHINA)

September 2021 – December 2021

- ❖ Independently developed plans and built a **Redis** proxy mechanism with **Node.js** that reduced redundant database access by over 95%
- ❖ Collaborated with Android developers and built One-Tap Login feature using **NestJS**, which allowed mobile users to log in with phone number within 1 second
- ❖ Built websites (**AJAX**) for the Console (**React**) and Docs (**Vue**), including Search Result & Filter, Guide Flow, Configuration Form, etc.
- ❖ Contributed to **open-source** Authing SSO SDK (npm) by developing convenient IDaaS features for web developers, with over 700 weekly downloads

DEEP TREKKER | Application Software Engineer (KITCHENER, ON, CANADA)

May 2022 – August 2022

- ❖ Built a Digital-Pan-Tilt-Zoom feature for auxiliary cameras as the **project owner** by developing the camera SDK, designing the control algorithms, and building the backend in **C++ (OOP)**
- ❖ Facilitated resolving performance issues for vehicle controllers by developing a **Qt** application that allows monitoring the hardware metrics on **Linux** systems