

# Longpan Zhou

+1 905-818-8892 | [zhoul83@mcmaster.ca](mailto:zhoul83@mcmaster.ca) | [Leetcode](#) | [LinkedIn](#) | [Github](#) | [Website](#)

## EDUCATION

---

### McMaster University

Hamilton, ON

*Bachelor of Engineering: Software Engineering*

*Sep. 2020 – May. 2025*

**Awards:** McMaster Honour Award (Dec 2020) | Dean's Honour List (Fall 2020 - Spring 2022)

## Experience

---

### Terrestrial Energy Inc.

May. 2023 – Dec. 2023

*Engineer Intern*

*Oakville, ON*

- Restructured the entire **corporate website**, transitioning the technology stack from WordPress to React.js to ensure CNSC (Canadian Nuclear Safety Commission) auditing standards, including frontend, backend, database.
- Implemented and maintained Windchill, a **Java**-based workflow management system, streamlining the design approval process and reducing life cycle time for the engineering and physics teams.
- Configured **VMware** workstations and built a scalable server infrastructure to support analytical software and computations, optimizing **Linux clusters** for enhanced performance.

### McMaster Rocketry

Dec. 2021 – May. 2023

*Ground Control Team member*

*Hamilton, ON*

- Designed and built a **rocket recovery system** by visualizing avionics data in real-time via a Lora telemetry stream using **TypeScript**, **React.js**, and **Rust** (Used in competition production).
- Attended **Launch Canada Competition** in Cochrane ON, **helped team** to set up rockets infrastructure and code.

## Projects

---

### CS2 External | *C++: DriectX 3D, Win32 API, IDA Pro, ReClass.NET, CheatEngine, x64dbg*

- Developed an open-source CS2 external cheat including features such as ESP, Aimbot, and Utils functions.
- Independent research and testing through problem-solving phases: problem, execution, failure, debugging, and success (Repeat), gaining knowledge about operation systems, x64 architecture, assembly code, debugging, reverse engineering, software design, security, kernel development, exploitation, virtualization, threading etc.
- Learned to analyze GitHub open-source projects, engage in code forums, and read text books.

### Israel-Palestine War Map | *Backend: Flask, Pandas, Requests - Frontend: Javascript, React, Vite, Bootstrap*

- Developed the frontend with **React.js** and **Google Maps API**, integrated data retrieval from the **ACLED** database for the Israel-Palestine conflict, and created a **Flask** backend for geo-spatial data processing.
- Hosted using **Google Firebase** for frontend, and **Python Anywhere** for backend.
- Designed a map illustrating the Israel-Palestine conflict, visually depicting key locations, territories, and historical events to help understanding and awareness of the complex geopolitical dynamics involved.

### Trading Crew | *Python: Numpy, TensorFlow, Matplotlib, Pandas, yFinance*

- Utilized **TensorFlow** and **Keras** with **LSTM** neural networks in **Pandas**-based data analysis for stock price prediction, employing standard training techniques for optimization and validation.
- Developed scripts utilizing **NumPy**, and **Matplotlib** libraries to calculate and visualize performance indices such as beta, variance, covariance and correlation etc for stock analysis purposes.
- Developed a tool that automates the download of stock information from various exchanges (NYSE, Nasdaq, TSX, etc.) using **Pandas** and **yFinance**, allowing for easy comparison of indices with selected stocks.

### London Subway Station | *Python: Numpy, Matplotlib, Flake, Pytest*

- Applied graph theory concepts to build the system, solving **strongly connected components** and **TSP**.
- Implemented adjacency matrix/directed weighted graph based **Dijkstra's** and **A\* algorithm** to compute the shortest paths between two subway stations using real public London subway station dataset.
- Improved performance by optimizing code and algorithm through benchmark using **Pytest**.

## Technical Skills

---

**Skills:** Problem Solving, Independent Thinking, Effective Communication, Work Ethics

**Languages:** Python, C++, C, Java, Julia, React.js, HTML, CSS, JavaScript

**Tools:** Git, Bash, Linux

**Honourable:** Top 5% Leetcode