JALEN CHENG

CONTACT

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EDUCATION

University of Waterloo

2024-2029 (Expected)

BASc, Computer Engineering

- President's scholarship of distinction, 2024

ASSETS

- C++, TypeScript, Python, VHDL

- Pandas, NumPy, FastAPI, Next.js, React, Tailwind CSS

- BeautifulSoup, Selenium

- Firebase, PostgreSQL, AWS

- REST, OSLC APIs, cURL

- Office Suite, SharePoint, Git, VMware, Visio

- English, Mandarin, French

- NATO Secret, GGP clearance

ACHIEVEMENTS

- University of Waterloo Engineering Society Representative

- NCSSAA Junior Badminton Mixed doubles Champion

- Varsity Badminton, Volleyball at Colonel By SS

- 4x Honour Roll, 2x Silver medal recipient at Colonel By SS

- DELF B2 Certificate

- Finalist for Kiwanis Club's Rick Barrigar Scholarship

WORK EXPERIENCE

Avionics Technician / Engineering Specialist
January 2025 - April 2025

General Dynamics Canada (MAISR ISS Program)

- Developed **Python** scripts to pull data from **IBM EWM** via **RESTful APIs** using the **requests** library
- Made **250+** calls via **cURL** and **Postman** in a test environment, using **OAuth** for production security
- Managed project metrics via **PowerBI** & **Excel**, using **Pandas** and **OpenPyXL** for visualization
- Delivered & presented **12+** security-critical items approved by DND for use with MAISR aircraft

Research Assistant
December 2023 - March 2024

Collingwood General and Marine Hospital

- **Co-authored** a research paper developing deep-learning algorithms for analyzing wrist x-rays
- Trained model to recognize fractures or acute injuries with **1000+** self-labelled datasets
- Gained knowledge and interest in machine learning and artificial intelligence from industry leaders
- Coordinated communication between professor at the University of Illinois and physicians at Collingwood General Marine Hospital, bridging the gap of knowledge between fields.

Hardware Technician
August 2018 - September 2024

Self-Employed

- Rigorously researched, planned and built **10+** computer systems and peripherals
- Modelled and performed various hardware modifications to meet specific product demands
- Applied hands-on skills including soldering, wiring, and hardware assembly of **100+** parts
- Performed technical analysis to ensure seamless operation and integration of components

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PROJECTS

StealScrape
May 2025 - Present

- Engineered full-stack webapp using **Next.js**, **React** and **FastAPI** to detect underpriced eBay listings
- Used **PostgreSQL** for batch processing, cutting query time by **85%** with **AsyncIO** and **Redis** caching
- Implemented hybrid **NLP** parser with rule-based patterns, regex extraction or LLM classification
- Determined retail value using **BeautifulSoup** and **Selenium** to scrape pricing from 15+ sources
- Devised value algorithm using **NumPy** statistical analysis, **Pandas** pipelines, and custom ML tuning

EasyASL
October 2024 - Present

Hack The Valley 9 - Winner (Best First Year Hack)

- Developed proof-of-concept, algorithm, API stack and **Figma** wireframe for AI sign language app
- Integrated **Google Cloud API**, created dataset for **OpenAI API** and aided in **PicsArt API** handoff
- Built certificate page to generate unique immutable UIDs for user verification in **TypeScript**
- Contributed to numerous UI/UX assets in PhotoShop, implementing designs with **React**

Lunero
January 2025

BUILD / Launchpoint - Nominee

- Deployed a responsive webapp using **TypeScript**, **React** and **FireBase** for authentication
- Selected as one of 8 teams from **300+** applicants to build & pitch a startup in 14 days
- Headed Lunero's pitch to VC's from **a16z**, **Sequoia Capital** and other notable companies
- Proposed proprietary algorithm to connect agents with users via **MySQL** database and **OpenAI API**

Frontline First
March 2020 - August 2020

VP Outreach / Junior Developer

- Directed outreach efforts, gaining support and raising over **$10,000** in PPE for frontline workers
- Received sponsorships from multinational corporations like **Clif**, **Garnier**, **Starbucks** and more
- Acquired additional funding valued at **$140,000** for additional vulnerable communities
- Aided in the development of our production website, using native Javascript and SASS