Frank Chen

frankc.ca/ | f74chen@uwaterloo.ca/ | linkedin.com/in/frank | github.com/frank

Education

University of Waterloo 2019 – 2024
Bachelor's of Software Engineering Candidate, (91.5% Average, 3.97/4.00 GPA) *Waterloo, ON*

Technical Skills

Languages: C++, Python, Java, Javascript, C, HTML, CSS
Frameworks/Libraries: Angular, React, Redux
Tools : Selenium, TestStand, GitKraken, Bitbucket, Jira, Firebase, LaTeX

Experience

Software Developer Jan. 2021 – Apr. 2021
Curtiss-Wright Defense Solutions *Ottawa, ON*

- **Reduced testing man-hours by 90%** for a network switch by implementing a **TestStand automation framework** that runs overnight from a unified hardware topology
- Automatically verified and interacted with web interfaces using **Selenium** and **Python** within the TestStand sequences
- Scripted over **60 test cases 2 weeks ahead of schedule**, several of which were unstable and required extensive communication with test engineers
- Created Confluence tutorial pages on new tools and components implemented for easy use by test engineers

Teaching Contractor July 2020 – Present
Frank's Math and CS *Ottawa, ON*

- Created custom 'home school' experiences in math and CS for classes of 4-8 high school students following International Baccalaureate outlines
- Holistic product earns **200%** when compared to private tutors with similar experience and education
- Negotiated contract yields job security and creative freedom in teaching for independent tutors, within the predetermined curriculum outline
- **100% contract renewal** by running effective classes, assignments, virtual tests and exams

Online Learning Assistant May 2020 – Aug. 2020
University of Waterloo *Waterloo, ON*

- Managed communications with 600+ students to ensure mental and academic wellness during remote learning using automated emails offering regular phone or video appointments with a 4% dedicated engagement rate

Projects

Confession Wall | ***React, Redux, Google OAuth - Adapted from online tutorial***

- Created a **React** web application with functional and class based components that allows users to confess their love
- Implemented **Redux** actions to manage CRUD operations

Fire Identification Rover | ***Arduino Uno R3, Java***

- Used **Arduino Uno R3** to control a mobile camera module navigate a programmable path
- Minimized implementation complexity by researching compatibility of **Java** classes with existing image processing equations in academia

Math Equation Solver | ***React, Python, C++, Flask***

- Created a web application using **React** and **Flask** to detect and solve polynomials using Newton's Method
- Designed and optimized algorithm for Newton's method in **C++**

Achievements

- 5x American Invitational Mathematics Examination (AIME) qualifier
- Canadian Mathematics Olympiad (CMO) qualifier (Top 50 in Canada) and 2x CMOQR qualifier
- Euclid (Math Contest) **top 1%** in Canada
- Modern **React** with **Redux** (by Stephen Grider) Certificate on Udemy