

Luke Tao

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Summary of Qualification

Languages

- C++, JavaScript, PHP, Python, HTML/CSS, Scheme, Racket, C

Tools and Frameworks

- Node.js/Express, React, Vim, MongoDB, Excel, Shell, GIMP, Laravel, MySQL, JQuery

Work Experience

Full-Stack Developer, Digital Extremes

05/2020–09/2020

- Developed **GoogleSheet API** scripts using **Python**, **Laravel**, and **Apache** to automate news parsing and content deployment, drastically improving run-time performance by over 3 times
- Assisted in the deployment of **Twitch** extensions during major events by automating caching and optimizing end-user transactions using **Python**
- Planned and scaled up database in **Laravel** in use with **MySQL** to accommodate various new query script implementations and relations
- Worked in **PHP** to maintain and improve site integrity during high-traffic occurrences

Project

Vm, C++

11/2020–11/2020

- Designed and built a custom version of **VIM** from scratch in **C++** with all key features supported(prefix, undo, and such), along with flexibility for extension maintained
- Implemented functional graphics using **C++'s Ncurses** library to support cursor, text-wrapping, screen movement, and **syntax highlighting** for .h and .cc files
- Constructed with various dynamic design patterns in mind, such as observer and inversions to achieve program wide low coupling and high cohesion

TitanicO, Node.js/Express, REACT, Azure, MongoDB

11/2019–1/2020

- Developed an Webapp that predicts the chance of an individual surviving the Titanic using full stack, particular **Node.js**, **REACT**, and **MongoDB**
- Assisted in the training of an Azure API to evaluate survival rates based on personal information
- Designed an interactive interface using **REACT** and implemented RESTful back-end services with **Node.js/Express**

Experience

Stanford University, California, Summer Intern

4/2018–06/2018

- Participated in research conference regarding **RSA** and **Twofish** data encoding algorithms
- Mechanically constructed an **Enigma** Machine prototype using a 4070 quad-xor gate and a solenoid switch
- Coordinated with DevOps to modify **Enigma** algorithms and improved its runtime using **Pickle** and serializing the data

Education

Candidate for Honours Bachelor of Computer Science, University of Waterloo

9/2019 - 5/2024

- Relevant Courses: **Data-Structures and Data-Management (Enriched)**, **Object-Oriented Software Development(Enriched)**, **Algorithm Design and Data Abstraction(Enriched)**, **Functional Program Design(Enriched)**
- Awards/Distinctions: **Duke of Edinburgh's Award Gold**, **President's Scholarship of Distinction**, **President's Research Award**