

Terry Chen

3A Computer Science, University of Waterloo Class of 2023

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Skills

Languages C++, Scala, Java, Python, JavaScript, PHP, CSS, HTML, UML, Haskell
Technologies React, Vue.js, Google Firebase, Apache Spark, MySQL, pandas, Valgrind, gdb, Apache Server
Sysadmin & DevOps Linux, Git, Vagrant, Bash, Zsh, Travis CI, CircleCI, Vim

Experience

Web team lead / Jesus Week Waterloo February 2019 – Present

- Redesigned and rewrote the site to meet WCAG-2.1 standards, resulting in a 241% increase in session duration and a 33% decrease in bounce rate.
- Implemented a flexible i18n solution in Jekyll, despite lack of native support and the inability to use plugins.
- Used Google Firebase to implement an anonymous user feedback system with file submission.

Lead web developer / Markville Computer Science Education Club June 2017 – June 2018

- Designed, built, and released a Jekyll-based website from scratch that enabled volunteers to easily create, maintain, and manage content with little technical experience.
- Integrated CodeMirror with Remarkable and AsciiDoctor.js to build a markup editor featuring live previewing.
- Set up CircleCI to separate asset and content build pipelines and reduce external resource overhead, increasing client-side performance to the 95th percentile of websites worldwide.

Web designer and full stack developer / EverythingDojo.com May 2014 – June 2015

- Worked on initial mockups, user interface, style guide, database, and CMS.
- Modernized back-end APIs in PHP and rebuilt the front-end to be responsive and performant.
- Advised on application security, including vulnerability scanning and penetration testing, overseeing switching to bcrypt for password hashing, and managing hotfix deployment for zero-day exploits.

Projects

GRT Tracker / Side Project December 2019 – Present

- Used Apache Spark's Structured Streaming API to analyze GTFS feeds and implement real-time performance metrics.
- Currently working on integration with Google Cloud Platform to allow for continuous, 24/7 data collection.

VM / CS 246E Final Group Project November 2019 – December 2019

- Designed and wrote an object-oriented Vim clone in C++14 with a partner, thus gaining experience in using RAII, functionals, and other advanced C++ features.
- Used UML to implement the Flux application architecture through combining advanced design patterns, leading to an extremely extensible product in which major features could be implemented in <1 hour.

Extra-curricular Activities

Volunteer Research Assistant / Prof. Samuel Wong, Dept. of Statistics, University of Waterloo January 2020 – Present

- Aided research in computational forestry by labelling datasets for training a supervised machine learning model.
- Refactored model implementation to use training results on arbitrary datasets (previously limited to leave-one-out cross-validation).

Member / GooseCTF September 2018 – Present

- Placed 2nd overall in the 2018 Pwn2Win CTF (Capture The Flag security challenge).
- Top-20 U.S.–Canada undergraduate finish in the 2018 CSAW CTF Qualifying Round.