

Experience

Raytheon Company

Software Engineer | Goleta, CA

January – July 2019

- Refactored, optimized, and documented a key plugin for a >50k LOC Windows desktop (C#) application. Resolved thread deadlocks.
- Designed and implemented embedded modern C++ software responsible for communicating between different hardware.

Projects

CSV for C++

<https://github.com/vincentlaucsb/csv-parser>

170 Stars

96% code coverage

- A multi-threaded C++11/17 CSV parser with parsing speeds of over 200MB/S and a simple iterator-based interface
- Performed unit testing with **Catch**, and used **Valgrind** and **CodeCov** to ensure correct behavior
- Utilized **CMake** and **Travis CI** continuous integration to ensure cross-platform, cross-compiler compatibility

Experiencer: Resume Builder

<http://vincela.com/experiencer>

- Designed and implemented a fast and flexible HTML/CSS resume editor
- Developed using **React + TypeScript, Webpack, SASS, and Jest**
- Supports cut & paste, rich text, and flexible multi-column layouts

Publications

Dots and Lines: A Survey of Graph Drawing Algorithms

UCSB Math Senior Thesis | 2018

<https://github.com/vincentlaucsb/Graph-Drawing>

- Researched and wrote several original proofs for several algorithms
- Animated algorithms with vector graphics using C++, Stanford Network Analysis Project, Eigen, and GNU Linear Programming Kit

Charlottesville on Twitter

August 2017 Kaggle Dataset Publishing Award Runner-Up | 2017

<https://www.kaggle.com/vincela9/charlottesville-on-twitter>

- Collected and processed 20 GB worth of tweets regarding the Charlottesville incident from Twitter using **Python** and **PostgreSQL**

Education

UC Santa Barbara

BA Mathematics | 2018

3.3 GPA (Dean's List x1)

- Computer Science:** Data Structure and Algorithms, Database Management Systems, Teaching Computer Science
- Minor in Statistical Science:** Graduate Data Mining, Time Series Analysis

Languages

- C++
- TypeScript, JavaScript
- C#
- Java
- Python
- R
- CSS, SASS
- LaTeX
- Bash Scripting
- SQL, Procedural SQL

Frameworks

- React
- Django
- Ruby on Rails

Tools

- PostgreSQL
- MySQL
- CMake
- Git