Bennett Mertz

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Skills

Tools and Software: JavaScript(ES7), Golang, TypeScript, Python3, Bash, Java/Android, AWS/GCP, Elisp, React/Redux, Linux, Postgres, Redis, Webpack, Ardiuno, HTML5, and of course LaTeX

Areas of Expertise: Fullstack dev, a11y, build systems / tooling

Experience

Software Engineer, *lantern.io* Oct 2018 - present

- Created a staging test environment to profile proxies under simulated high load from many simultanous client connections, and debugged a number of critical performance bugs that were causing proxy crashes
- Wrote build scripts for cross platform linux packaging of the core proxy application
- Audited and overhauled UI accessibility, migrated codebase to TypeScript, implemented frontend of a p2p file sharing product, modernized legacy react code, and oversaw an entire UI redesign
- Implemented the backend and frontend of a user facing notification system and an issue reporting endpoint

Coding Retreat, *Recurse Center* July 2018 - Sept 2018

- Wrote scripts to compile Opencv-Python with FFMPEG support from binaries in Centos 7
- Implemented a steganographic encoder and decoder in Go

Software Development and Project Mangement Intern, *Enventure Enterprises* May 2017 - Jan 2018

- Engineered and deployed a production ready progressive web app used by company management
- Product managed a team of six in the design and production of an open source data collection app

Research Assistant, *Nanomaterials & Imaging Lab, College of William & Mary* Jan 2015 - Jan 2018

- Researched novel applications of surfactant adsorption on graphene using Atomic Force Microscopy

Projects

Ray Tracer, *github.com/bcmertz/ray-tracer* July 2020 - August 2020

- Implemented a ray tracer that is capable of rendering shapes, colors, shadows, and lights in Go

Concurrent Downloader, *github.com/bcmertz/sanic* Oct 2018 - Jan 2019

- Leveraged Go concurrency to create an open source remote file / torrent downloader, with optional built in rate limiting to aid in downloading large video files from the internet

Search Within Video, *www.searchwithinvideo.com* March 2017 - May 2017

- Built a platform allowing users to upload videos and process them with machine learning and computer vision to make the videos searchable for objects, text, and scenery
- Engineered a microservice architecture to preprocess video data in order to optimize for scalability and speed

Education

College of William and Mary, *Williamsburg, VA* May 2018

- B.S. Computational Physics - 3.92 GPA, James Monroe Scholar