Bennett Mertz

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Skills

Tools and Software: Javascript(ES7), Python 3, Golang, React, AWS S3/EC2, Tensorflow, OpenCV, Linux, MongoDB, Vagrant, Redis, Postgres, Webpack, Babel, Immutable.js, Node.js, Flask, HTML5 and of course LaTeX

Areas of Expertise: React, backend development, computer vision, data processing

Experience

Fellow, Recurse Center July 2018 - present

- Implemented a barebones Linux dualboot from binaries on my personal machine
- Built two JavaScript transpilers using a bottom-up LR parser and PEG.js
- Wrote a shell script to compile Opencv-Python with FFMPEG support from binaries in Centos 7
- Implemented steganographic encoding and decoding 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 people in the design and production of an open source data collection app
- Implemented optimizations to make the site available offline and reduced assets loaded each revisit to 455 bytes
- Built with React, Immutable.js, Postgres, Recharts, MaterialUI, Airbnb linting standards, service workers

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

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
- Leveraged Google Analytics and AdWords to grow website traffic 431% in 2 weeks
- Implemented a data pipeline using OpenCV, Clarifai, AWS S3/EC2, Heroku, Node.js, and Flask

ExploView, itunes.apple.com/app/id1228404743 Feb 2017

- Built a native cross-platform mobile app that uses machine learning on photos taken in-app, providing augmented user experience with suggested related services based off of real time image recognition
- Built with TensorFlow, AWS S3/EC2, React Native, MongoDB

Espresso, https://github.com/bcmertz/Espresso Jan 2017

- Created a super lightweight clone of the popular package Express
- Built with HTTP and included middleware and Handlebars.js support to provide easy routing functionality

Education

College of William and Mary, Williamsburg, VA May 2018

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