Kevin Black

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Education

Pursuing B. S. in Computer Science – University of Texas at Austin 2018 – 2022

- Turing Scholars, Dean's Scholars honors programs
- Coursework: Honors data structures, discrete math, computer architecture, linear algebra, probability

Work Experience

Software Infrastructure Intern – Bloomberg L.P. Jun 2019 – Aug 2019

- Wrote a custom **Kubernetes** controller in **Go** in order to add distributed **Tensorflow** capabilities to an internal data science computing cluster
- Integrated with **Kubeflow** components in order to support multiple distribution strategies, including **Horovod**
- Worked to train and benchmark large deep learning models in a distributed manner using my new features
- Gave a talk at the October 2019 Kubeflow summit in Sunnyvale, CA on my work and the benchmark results

Systems Team Intern – Silicon Labs Jun 2018 – Aug 2018

- Developed a web application to display chip characterization data in various table and chart formats
- Written using **Python/Flask** on the backend and **Javascript/jQuery** on the frontend
- Used by employees throughout the company to view, analyze, and compare live data from an internal database

MCU Applications Team Intern – Silicon Labs Jun 2017 – Aug 2017

- Performed embedded firmware development (**using C**) on the Silicon Labs EFM32 microcontrollers
- Created example projects to demonstrate device capabilities, including a Wireless Encrypted Voice Communication Demo that is showcased on the Silicon Labs Community Blog

Foundry Team Intern – Silicon Labs Jun 2016 – Aug 2016

- Wrote **Python** and **VBA** scripts for data parsing, analysis, and presentation
- Performed semiconductor device measurement and characterization in the Failure Analysis lab

Projects

Syntype – Team Member (devpost.com/software/syntype) February 2019

- A smart keyboard typing trainer for aspiring programmers
- Uses **online learning** to determine what patterns the user struggles with and and give them practice code that focuses on their weak points, but that is still syntatically valid
- Implemented with **Pytorch** on the backend and **React** on the frontend, communicating over **WebSocket**
- Created with a team of 4 at HackDFW 2019

copykey – Team Member (devpost.com/software/copykey) October 2018

- Uses **Python/OpenCV** and **OpenSCAD** to process a several-second video of a standard pin tumbler key and turn it into a 3D-printable working copy
- Generated keys printed in cheap PLA plastic were able to open several different Master, Schlage, and Kwikset locks
- Created with a team of 4 at HackTX 2018

manaTEAMS – Developer (manateams.com) June 2016 – May 2017

- **Android** app in **Java** that lets students easily check their grades, recieve updates, and view projected averages
- Acquired over 6000 users and recognized by the Austin ISD school district

Other Projects – kevinblack.dev

- More projects and details can be found on my personal website and portfolio

Extracurricular Activities

Texas Spacecraft Laboratory – Member (github.com/autognc) 2019 – Present

- Member of the Seeker mission, which aims to perform real-time position and pose detection of spacecraft in orbit based on a satellite camera feed
- Created a standalone **Python** library (SSI) for generating synthetic training data using **Blender**
- Also worked on other elements of a machine learning pipeline for training and evaluating various deep computer vision models
- Seeker-1 was chosen by NASA over competing internal prototypes to fly on a mission in July 2019, and Seeker-2 was funded through August 2019