Brandon Barker

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Software Engineer // Computer Scientist



**Languages & Skills**

**Python JavaScript Java TypeScript SQL C# Haskell C++**

**Frameworks //** NodeJS, WebGL, RESTful, Google Cloud, Amazon Web Services, ReactJS, NumPy, Django, Docker, SQL, Flask, PostgreSQL, MySQL, Express, SASS, Git, GraphQL, Android, React Native, Amazon Web Services, Hive, Spark, Presto

**Work Experience**

**[UBER](https://uber.com/)**May 2020 – Aug 2020

SOFTWARE ENGINEER INTERN *San Francisco, CA*

* Collaborated with the Marketplace Data & Intelligence team to build largescale data analysis tooling.
* Addressed several areas within the software stack to deploy enhancements quickly while adapting to company paradigms. Worked with distributed technologies such as Hive, Presto, and Spark.
* Architected and implemented a dynamic H3 Hexagon clustering product to ease experimentation, a system crucial for Uber's machine learning models.

[**Cesium GS**](https://cesium.com/)May 2019 – Aug 2019

SOFTWARE ENGINEER INTERN *Philadelphia, PA*

* Enhanced SaaS platform that empowers developers and data providers to build dynamic 3D geospatial applications.
* Built integrations for popular 3D content creation tools - WebODM, Blender, and 3D Max - for smooth upload to Cesium ion to generate 3D Tiles for use in CesiumJS and other 3D engines.
* Championed efforts at improving Cesium JS rendering and solely orchestrated most of the changes within version 1.61.

[**COMMA.AI**](https://comma.ai/)May 2018 – Aug 2018

SOFTWARE ENGINEER INTERN *San Francisco, CA*

* Contributed to the development of the full-stack dashboard application for a self-driving car kit developed by George Hotz, focusing on data to solve severe problems.
* Developed a mapping engine managing and visualizing over 5,000,000 miles of data.
* Structured toolset to generate 3D Tiles and provide metadata when interacting with the mapping frontend.

[**Dokkio**](http://dokkio.com/)Jun 2017 – Jan 2018

SOFTWARE ENGINEER INTERN *San Francisco, CA*

* Initiated a better way to search content, give the content a business context, organize it, and work on it with others to make content-focused teamwork more effective.
* Analyzed 2000GB of data and engineered a recommendation system for categorizing files and folders.
* Implemented a document preview engine capable of loading documents with thousands of pages.

**Education**

**Major Computer Science, Bus. Management & Minor Mathematics** Aug 2017 – May 2021

WEST CHESTER UNIVERSITY *GPA 3.9*

**Honors & Awards**

**Top 50 Worldwide Hacker by Major League Hacking** Jan 2020

Chosen from 100,000+ hackathon participants who exemplify diversity, technological innovation, and leadership.

**1871 Award** Jan 2020

Recognized 71 undergraduates who are high achieving in academics, leadership, community-engagement, and career-readiness.

**Top 10 out of 1500, Best Hardware Hack & Best Health Hack at PennApps** Sep 2019

Engineered an assistive device for spatial navigation and obstacle avoidance through SLAM with haptic feedback.

**Projects**

**Elderlyf** Sep 2019

*Jetson Nano – Segnet – Python – Intel Realsense*

Self-navigating and obstacle avoidance walker for the blind elderly.

**Entium** Aug 2018

*Pointclouds – Big Data – Python – JavaScript*

Pointcloud optimizer and metadata compressor to generate 3D Tilesets for CesiumJS.