

Brandon Barker

Software Engineer // Computer Scientist

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Languages & Skills

Python
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JavaScript
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Java
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TypeScript
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SQL
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C#
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Haskell
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C++
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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

Work Experience

CESIUM GS

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

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

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.

AIRPHRAME

Jun 2015 – Oct 2015

SOFTWARE ENGINEER INTERN

San Francisco, CA

- Optimized daily operations by building tools capable of performing data consolidation from the web platform with a just-in-time compression proxy.
- Developed the mapping platform's aerial avoidance system and integrated video-based capture, capable of recording thousands of hours.

Education

MAJOR COMPUTER SCIENCE, BUS. MANAGEMENT & MINOR MATHEMATICS

Aug 2017 – May 2021

WEST CHESTER UNIVERSITY

GPA 3.9

Honors & Awards

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.

BENJAMIN E. FABER AWARD

Nov 2018

Scholarship awarded to a mathematics minor that displays exceptionalism within their classes.

BEST AUTONOMOUS OUT OF TEAMS 45,000 AT FTC WORLD COMPETITION

Apr 2017

Awarded the Control Award for implementation of a Kalman filter, PID drive, and integration of sensors in the control of the team's robot.

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.