Aiden **Benner**

SOFTWARE DEVELOPER

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Skills

Languages: C++ // C# // C // Java // Python // JavaScript // Scala
Technologies: Django // .NET // Node // React // Android // iOS
Tools: Git // Unix // Bash // Vim

Experience

Google
Software Developer Intern - Chrome

Waterloo, Ontario
Sep 2018 - Dec 2018

- Developed a Java annotation processor that generates classes to wrap native methods in order to support mocking of native methods and obfuscation of classes that contain native methods using JavaPoet and Guava
- Added build rules to support annotation processors in the generation of gradle files that work with Android Studio
- Added support for python autoformatting on diffs in chromium developer tools by using regex to parse git diff output
- Created an ErrorProne rule to detect redundant initializations of fields by statically processing the Java AST in order to minimize chromium's binary size

A Thinking Ape
Software Developer Intern - LiveOps/Fullstack

Vancouver, BC
Jan 2018 - May 2018

- Automated the process of adding in-game items using Django and JS saving designers hours per iteration cycle
- Designed a service using Django that sends users notices and push notifications for important in-game events
- Developed a news activity on iOS/Android for a mobile game with +10 million downloads that lets players receive and manage in-game alerts and notifications

Localintel
Software Developer Intern - Fullstack

Calgary, AB
May 2017 - Sep 2017

- Created a service that generates pdf reports from municipal microsites for clients using Latex, Angular 2, and C#
- Developed an automated visual CI regression test utility using phantomjs and nodejs to detect frontend changes
- Designed a Python utility to compile site usage data into internal metric reports

GEO-SLOPE International
Software Developer Intern - Fullstack

Calgary, AB
July-August 2014, 2015, 2016

- Developed a webservice, using C# and SQL, to parse analytics XML from thousands of GeoStudio sessions daily
- Created a utility using C# that uses license data to send customers reminders, automating hours of work weekly
- Implemented a service to detect log errors and send internal alerts when scheduled tasks and services fail

Projects

Raytracer
C++
- A realistic graphical renderer and vector math library that simulates light ray projection
- Supports reflections, refractions, translucent material and soft shadows using montecarlo rendering

Lacs Compiler
Scala
- Compiles a subset of Scala into Mips assembly using CYK parsing and an abstract syntax tree written
- Supports closures, inner functions, first class functions, garbage collection and type checking

Matrix Utils
JavaScript
- Lets users input matrices and perform operations with LaTeX output
- Uses Gaussian Elimination to calculate matrix inverses and determinants

Orbit Assist
C++, Python
- A portable personal assistant written in C++ and built for the TI Tiva and Orbit Boosterpack
- Microcontroller communicates over serial with an event handling framework written in Python

Genetic Art
Python
- Generates art by recreating a source image using as few basic shapes as possible
- Uses a mixture of genetic algorithms and hill climbing heuristics to minimize pixel distance

Education

University of Waterloo - Candidate for Bachelor of Software Engineering
3.9+/4.0 ENG/MATH Faculty cGPA

Waterloo, Canada
2016 - 2021 (Expected)