

# Aiden Benner

SOFTWARE ENGINEER

☎ (587) 582-2114 | ✉ [aiden.benner@gmail.com](mailto:aiden.benner@gmail.com) | 🏠 [abenner.ca](http://abenner.ca) | 🔗 [aidenbenner](https://github.com/aidenbenner) | 📺 [aidenbenner](https://www.youtube.com/channel/UCv33333333333333333333)

## Skills

**Languages:** C++ // C# // C // Java // Python // JavaScript // Scala

**Technologies:** Django // .NET // Node // React // Android // iOS

**Tools:** Git // Unix // Bash // Vim

## Experience

### Google

Waterloo, Ontario

SOFTWARE DEVELOPER INTERN - CHROME

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

Vancouver, BC

SOFTWARE DEVELOPER INTERN - LIVEOPS/FULLSTACK

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

Calgary, AB

SOFTWARE DEVELOPER INTERN - FULLSTACK

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

Calgary, AB

SOFTWARE DEVELOPER INTERN - FULLSTACK

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

Waterloo, Canada

3.9+/4.0 ENG/MATH FACULTY CGPA

2016 - 2021 (Expected)