

Aiden Benner

SOFTWARE DEVELOPER

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Technical Skills

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

Technologies: Git // Bash // Unix // Boost // Android // React // Django

Experience

Citadel Securities

New York City

SOFTWARE DEVELOPER INTERN (FTAP) - FIXED INCOME MARKET MAKING

May 2019 - Present

- Created a concurrent C++ service that tracks and publishes pricing relationships between on the run and off the run treasuries. This data is streamed to trader tools in order to help inform quoting and pricing decisions
- Added features and improved large dataset performance for trader grid tooling using WebSockets, C++ and JavaScript
- Extended high performance concurrent C++ utilities to take snapshots of market data for quantitative research and real time trading applications

Google

Waterloo, Ontario

SOFTWARE DEVELOPER INTERN - CHROME

Sep 2018 - Dec 2018

- Developed build tools to allow mocking of Java classes that include native code in tests using an annotation processor, and C code generated from python. Improving the overall stability and testability of code in Chrome for Android
- Added support for python autoformatting over diffs in chromium developer tools by using regex to parse git diff output
- Created a tool to detect redundant initializations of Java fields by statically processing the Java Abstract Syntax Tree to minimize binary size

A Thinking Ape

Vancouver, BC

SOFTWARE DEVELOPER INTERN - LIVEOPS/FULLSTACK

Jan 2018 - May 2018

- Created tools to automate the process in adding and balancing in-game items 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 both 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 Node.js to detect frontend changes
- Designed a Python utility to compile site usage data into internal metric reports and graphs using matplotlib

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

Education

University of Waterloo - Candidate for Bachelor of Software Engineering

Waterloo, Canada

3.9+/4.0 ENG/MATH FACULTY CGPA

2016 - 2021 (Expected)

Projects

Halite 3 🏆

C++

- A bot written for a game AI competition. Ranked 1st at the undergrad level, 7th/4000+ overall
- Bot uses the Hungarian algorithm for job assignment and order dispatching

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
- Supports closures, inner functions, first class functions, garbage collection, and type checking

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 squared pixel distance