Brett Schiff

Software Developer

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Experience With:

Languages:		Development:		Operating Systems:
C++	C#	Visual Studio	Git	Windows
Java	Lua	IntelliJ	Unity	Mac
C	Python	AWS	Vim	Linux

Work Experience:

Software Development Engineer at AWS Security **June 2020 - Present**

I currently work in security automation on tools which perform static code analysis to discover security vulnerabilities. I'm responsible for maintaining existing tooling and building new tools to enable scanning and alerting on the entire AWS codebase. I work on a distributed system that uses both cloud computing and physical hosts, management of classified data at the AWS scale, and the system design to keep it all running smoothly even as the system expands further. I serve as a mentor for interns and new hires, and I have started working in interviewing as well

Software Development Engineer Intern at AWS Security **June 2019 - September 2019**

I interned at Amazon in 2019, where I worked on an open-source tool called the C Bounded Model Checker (CBMC). While it was originally developed for C, it parsed code into an intermediate GOTO language. My work over this internship was primarily development of a parser for the Rust language

TA Positions: **September 2018 - May 2020**

Advanced C/C++, Data Structures, and Algorithm Analysis

My responsibilities included holding office hours and grading assignments and exams

ProjectFUN **June 2018 - August 2018**

A summer camp where middle/high school aged kids are taught game development skills. I was the Lead Teacher in two courses: *Video Game Programming* and *Artificial Intelligence for Games*, which covered programming basics, AI fundamentals, and related mathematics

Education:

DigiPen Institute of Technology **Graduated May 2020**

BS in Computer Science and Real Time Interactive Simulation – GPA 3.70

Selected Personal Projects:

PoCo

A game where the player moves in polar coordinates. This was a successful experiment to see how well an intuitive understanding of polar coordinates can be taught via gameplay—turns out, pretty well!

Neural Network

A neural network written in C++ that has been useful in a few subsequent mini projects. It can train via backpropagation or via genetic algorithm and is serializable to save and reload networks

Break the Board

A game created for Ludum Dare 42 with the theme *Running out of Space,* developed in Unity. Of the about 1000 entries in the Compo competition, it was rated in the top 10%, and I'd love for you to play it

Academic Projects:

Cat's Cradle (team of 9) - Physics, AI, and Gameplay Programmer

Cat's Cradle is a 3D, third person puzzle-platformer where the player throws, retracts, and "ziplines" along yarn to solve puzzles and explore levels. I implemented the Bullet Physics Engine, implemented Behavior Trees for a Behavior System, and did gameplay programming—primarily enemies and interactables

Shortstack (team of 6) - Physics, AI, and Gameplay Programmer

Shortstack is a 2D, local co-op, side-scrolling platformer where players are gnomes who stack on each other to combine abilities built in a custom engine made in C++

- Designed and implemented the physics system in C++
  - Box, Circle, and Capsule collision, primarily using SAT
  - Utilities: raycasting, debug hitbox display, particle collision
- Gameplay programming in Lua – primarily enemy AI

PAX WEST / SEATTLE, WA

Displayed at PAX West 2018