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 Amazon — June 2020 - Present
- AWS Security Automation—static code analysis of the AWS codebase for security vulnerabilities
- Manage distributed systems across bare metal hosts and cloud computing
- Store, manipulate, and process often privileged data at the AWS scale
- Mentor new hire and interns, participate in the interview process for new candidates

Software Development Engineer Intern at Amazon — June 2019 - September 2019
- Worked on an open-source tool: the C Bounded Model Checker (CBMC)
- Explored academic papers on Rust code verification for viability at Amazon
- Developed a parser from Rust to GOTO language to CBMC the ability to analyze Rust
- Received and accepted return offer

TA Positions: — September 2018 - May 2020
Advanced C/C++, Data Structures, and Algorithm Analysis
- Responsibilities included holding office hours and grading assignments and exams

ProjectFUN — June 2018 - August 2018
- Summer camp where middle/high school aged kids are taught game development skills
- Lead Teacher in two courses: Video Game Programming and Artificial Intelligence for Games
- Taught programming basics, AI fundamentals, and related mathematics

Education:

DigiPen Institute of Technology — Graduated May 2020
BS in Computer Science and Real Time Interactive Simulation, Minor in Mathematics – 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