

Brett Schiff


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Software Developer

Languages, Skills and Software:	Proficiency: C++ C Visual Studio Git GNU Compiler SVN Doxygen Windows	Familiarity: Lua C# Java JavaScript HTML Clang Unity Agile Development Oracle VM VirtualBox Linux
Academic Projects:	Shortstack(team of 6) Physics Programmer August 2017 - May 2018 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++. <ul style="list-style-type: none">Designed and implemented the physics system in C++<ul style="list-style-type: none">Separating Axis Theorem(SAT) for collision detectionUtilities: raycasting, debug hitbox display, point collision for particlesWorked with ImGui to incorporate physics into the game's editorContributed to gameplay programming in Lua – primarily enemy AI  <i>Displayed at PAX West 2018</i>	
	Relics of Light(team of 4) Physics Programmer August 2016 - May 2017 Relics of Light is a top-down 2D puzzle-adventure game featuring open-world exploration, puzzle challenges, and unlockable character abilities built in a custom engine made in C. <ul style="list-style-type: none">Created the physics system in C using SAT for collision detectionDeveloped input system using a wrapper around GLFWDesigned the overworld and all underground puzzles in Tiled	
Education:	DigiPen Institute of Technology BS in Computer Science and Real Time Interactive Simulation	Expected Graduation May 2020
Work Experience:	TA Positions: Algorithm Analysis and Advanced C/C++ September 2018 - Present I am currently a TA in two classes at DigiPen: CS330(<i>Algorithm Analysis</i>) and CS225(<i>Advanced C/C++</i>). The job entails holding office hours to help students in the classes and grading assignments/exams. ProjectFUN June 2018 - August 2018 A summer camp offered through DigiPen where game development skills are taught to kids. My roles: <ul style="list-style-type: none">TA and Lead Teacher in the Video Game Programming 1 course—using Java in a custom engineLead Teacher in the Artificial Intelligence for Games course—AI fundamentals and important related mathematics taught in the Zero Engine	
Personal Projects:	Neural Network December 2017 - July 2018 A neural network capable of self-training by selection and blending of most fit networks in a population. Current Features: <ul style="list-style-type: none">Backpropogation and SerializationTests: averaging numbers and playing a simple ASCII gameMixing of different neural networks in addition to backpropogation for increased learning rates and simulation of "evolution" for self-training Break the Board August 2018 A game created for Ludum Dare 42 with the theme <i>Running out of Space</i> in Unity. I plan to polish it up a bit more and publish it on the Google Play Store. Poco July 2018 - Present A game created in Unity where the player moves using a polar coordinate system to dodge randomly spawning obstacles in an infinite 'runner.' It will be released on the Google Play Store.	