STEVEN TUCCI

(514) 953 4295
tuccisteven@gmail.com
tucci.github.io

EDUCATION

- **Bachelor's Degree In Computer Science**, Concordia University, 2018
- **DEC in Computer Science**, Vanier College, 2015

WORK EXPERIENCE

Web Developer, Crew Labs / Unsplash, 2015 (3 Month Internship)

- Helped implement backend administration interface for the support team
- Managed backend, frontend, and database layers. Helped design UI and UX
- Implemented, debugged, and documented all existing and new features

Warehouse Assistant, Ardene Holdings Inc, 2007 - 2013

- Held responsibility of the distribution department, and Supervised new employees

SKILLS

- C, C++, C#, OpenGL, Unity, Unreal, RenderDoc, Vtune, DCC Tools, Maya/Blender, Substance
- Debugging, Profiling, Reading assembly output, Poking through memory, Optimization
- Understanding of Multi-threading, Memory hierarchy, Memory allocators, and Compilers
- Version Control(Git), Unit Testing, Documentation, Technical Writing, UI/UX design
- 3D Math, Linear Algebra, Calculus, OpenCV, Java, Android, Python, JavaScript, Linux

PROJECTS AND PROGRAMMING EXPERIENCE

Custom 3D Game Engine and Editor in C++

- Implemented Data Oriented ECS with an experimental multithreaded job system.
- Provided support for future multiple backend renderers (OpenGL, Vulkan, DX12, etc.)
- Designed a PBR material system with HDR Support, IBL, Dynamic lighting and Shadows
- Optimized systems to use Custom Memory allocators and a custom SIMD Math Library
- Wrote Scene graph System, Asset Management System, Import/Export system, and Logger
- Developed a real time IMGUI Editor with undo/redo and drag and drop support

Compiler in C++

- Programmed the lexer, parser, and code generator from the ground up without external tools
- Implemented as a multi pass LL1 Top Down Table Driven Parser, with error handling/reporting
- Wrote code generator for a RISC machine with simple compiler optimizations.

Procedurally generated art gallery experience in C++/OpenGL

- Managed and Collaborated on a complex project with a large group on a tight deadline
- Assisted in programming several procedural generation algorithms
- Wrote 3d engine framework for group to work off of, and programmed the shaders

Quake Style Multiplayer Game in Unity/C#

- Wrote the Networking code, Gameplay code, and Player movement code
- Designed and Collaborated on Map layout, Weapons, Particle effects, and Game sound
- Programmed all weapons, health/armor pickups. Meticulously tweaked player movement

Single player Top down Shooter Game in Unity/C#

- Implemented AI techniques: State machines, Behavior trees, Waypoint tactics, Context aware AI
- Programmed logic for Squad leader commands, group ambushing, and cover system
- Assisted in map design. 3 way lane mechanic with capture points, bosses, and enemy waves