Max Slater

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EDUCATION

CARNEGIE MELLON UNIVERSITY
BS Computer Science
Computer Systems
2018-2022 | Pittsburgh, PA
Cum. GPA: 3.94 / 4.0
Major GPA: 4.0 / 4.0

UNIVERSITY OF NEVADA, RENO
2014-2018 | Reno, NV
Cum. GPA: 4.0 / 4.0

THE DAVIDSON ACADEMY OF NEVADA
2012-2018 | Reno, NV
Cum. GPA: 4.0 / 4.0

LINKS

GitHub://TheNumbat
LinkedIn://TheNumbat

COURSEWORK

Operating System Design and Impl.
Computer Graphics (TA)
Introduction to Computer Systems
Parallel and Sequential Data
 Structures and Algorithms
Great Ideas in Theoretical C.S.
Discrete Differential Geometry
Multidimensional Calculus
Matrices and Linear Transformations
Probability and Computing

PROGRAMMING

Primary (50k+ lines):
C++
Other:
C • C++17 • SML • Python • Bash
Tools:
OpenGL • Win32 • Linux • Git(Hub)

EXPERIENCE

APPLE | GPU Software Intern
Summer 2020 | Cupertino, CA
- Incoming intern for summer 2020.

CARNEGIE MELLON UNIVERSITY | 15-462 Computer Graphics
Teaching Assistant
Jan 2020 - Present | Pittsburgh, PA
- Led re-writing effort for the course codebase, Scotty3D. (See projects.)
- Held office hours, answered student questions, and assisted with assignment/exam grading.

NVIDIA | 3D Graphics Software Intern
Summer 2019 | Santa Clara, CA
- Constructed automated testing service measuring OpenGL/Vulkan graphics performance on embedded Linux devices. Service used by the embedded team to catch regressions and bring-up new silicon.
- Profiled and diagnosed OpenGL benchmark performance bugs.

UNIVERSITY OF NEVADA, RENO | Research Intern
May 2015 – May 2016 | Reno, NV
- Assisted in wireless networking research under Dr. Shamik Sengupta supported by NSF Grant #IIA-1301726.
- Authored and published a *white paper* on the subject.

PROJECTS

EXILE | C++, OpenGL
Jul 2017 – Present | GitHub
- *Handmade* from-scratch voxel game engine including a modern OpenGL deferred renderer, parallel voxel world generation, multiple OS layers, a custom standard library, type introspection, debugging/profiling features, and more.
- Tech blog at thenumbat.github.io.

DAWN | C++, OpenGL, SDL
Aug 2019 | GitHub
- Path tracer with a focus on photo-realism and performance through data-oriented design.

(NEW) SCOTTY3D | C++, OpenGL, SDL
Dec 2019 - Present | GitHub
- Educational software package implementing interactive 3D mesh editing, realistic path tracing, and dynamic animation.
- Currently rewriting legacy codebase with new UI, modern OpenGL, C++17, fixes/optimizations, and student-focused explanations.