

# Max Slater

thenumbat.github.io  
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## EDUCATION

### CARNEGIE MELLON UNIVERSITY

BS COMPUTER SCIENCE  
2018-2022 | Pittsburgh, PA  
Cum. GPA: 3.91 / 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](#)  
Twitch://[The\\_Numbat](#)

## COURSEWORK

Principles of Imperative Computation  
Principles of Functional Programming  
Great Ideas in Theoretical CS  
Parallel and Sequential Data Structures and Algorithms  
Introduction to Computer Systems  
Computer Graphics  
Mathematical Foundations for CS  
Matrices and Linear Transformations  
Multidimensional Calculus

## PROGRAMMING

Primary (40,000+ lines):

C++

Other:

C • C++17 • SML • Python • Bash

Tools:

OpenGL • Win32 • Linux • Git(Hub)

## EXPERIENCE

### 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.

### MASQUERADE MEDIA INC. | SOFTWARE ENGINEERING INTERN

Summer 2017 | Reno, NV

- Contributed to a mobile game production pipeline including asset processing, scripting, gameplay prototyping, and testing using Unity and Maya.
- Designed and implemented web-based promotional games driving customer acquisition.

### 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.
- Helped plan outreach programs for STEM education.

## PROJECTS

### EXILE | C++, OPENGGL

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++, OPENGGL, SDL

Aug 2019 - Present | [GitHub](#)

- Path tracer with a focus on photo-realism and performance through data-oriented design.

### VIZ.ML | C++, OPENGGL, SDL

HackCMU 2018 | [GitHub](#)

- Dimensionality reduction and visualization tool for high dimensional data sets.

### 3D GRAPHER | C++, OPENGGL, SDL

Fall 2017 | [GitHub](#)

- Visualization tool for the Davidson Academy multivariable calculus course.