

Daniel W.B. Olson

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EDUCATION

2019-2020	MS, Computer Science Emphasis: Computer Graphics	University of Minnesota GPA: 4.0
2015-2019	BS, Computer Science Emphasis: Computer Graphics	University of Minnesota GPA: 3.67

WORK EXPERIENCE

- May 2020 - Present **Deviation Games** - *Software Engineer*
- Software Engineer on Graphics team working on new, unreleased IP.
- Summer 2018, 2019, Jan 2020 - May 2020 **IV/LAB University of Minnesota** - *Research Assistant*
- Worked to boost clustered-rendering performance through a custom remote rendering pipeline.
 - Implemented GPU Instanced rendering with level-of-detail and frustum culling calculated in a compute shader.
 - Designed and developed a streamlined automated workflow for preparing high-fidelity 3D art assets for real-time rendering.
- Aug 2019-Dec 2019 **University of Minnesota** - *Graduate Teaching Assistant*
- Designed and implemented a 2D web graphics library for students to use for simulations.
- 2016-2018 **University of Minnesota** - *Undergraduate Teaching Assistant*
- Helped students during office hours and helped with grading.
- 2016 **University of Minnesota** - *President of PVP*
- Led development of 2 semester-long games with a primary club-goal of getting an introduction to game development.

SKILLS

C++, HLSL, C# | UE4, OpenGL, Unity | Visual Studio, Perforce, PIX, RenderDoc, Git, CMake

PROJECTS

Custom C++ Real-time Rendering Engine

- Created a custom C++/OpenGL rendering engine featuring an ECS Architecture, Tiled-deferred rendering w/Forward+ for transparent geometry, shadow maps, custom dynamic memory management, multi-pass rendering, separated game logic in Lua, materials and texturing, and hundreds of lights in real-time.

Real-time GPU Ray Tracer

- Developed a Real-time GPU Ray Tracer within my above rendering engine, featuring CPU BVH creation and GPU traversal, 36 lights, shadows, and reflections in real-time.

ACTIVITIES

- Programmer in Global Game Jam 2017.
- Played rugby at University of Minnesota and Hong Kong University of Science and Technology.
- Played trumpet in the University of Minnesota Marching band.