

DEREK H. WILLIAMS

Game Designer • Creative Engineer

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EDUCATION

Carnegie Mellon University, Expected 2024
Entertainment Technology Center, Pittsburgh, PA
Masters of Entertainment Technology

The Pennsylvania State University, Class of 2015
College of Engineering, State College, PA
Bachelor of Mechanical Engineering

Unity Engine Development

C#

Shader Graph

Level design

Maya

Pixel Art - Aseprite

Mechanical Design

Circuit Design

SKILLS

GAME PROJECTS

Building Virtual Worlds

Carnegie Mellon University

Pittsburgh, PA

Aug 2022 – Dec 2022

Working on interdisciplinary teams of 4 other students, produced games on a schedule of one to three weeks each. Roles I filled in the Unity projects included Level Designer, Programmer, Character Modeler, Mechanical Designer, and Sound Designer.

Two x 4 Racing • A wacky, fast-paced cooperative time trial game with large custom bike wheel steering hardware. Attended GDC 2023 for the alt.ctrl.gdc showcase.

- Implemented vehicle physics controller in C#, crafted steering wheels and wired Arduino/Phidget hardware
- Iterated race track level design, based on playtest feedback focused on smoothing the learning curve

Singularity • A narrative VR experience about a DIY spaceship, a black hole, and living with the loss of a loved one

- Wrote a player experience script, detailing intended verbs and environmental cues
- Designed and modeled the character of the game in Maya, and wrote a shader to fade her in and out during flashbacks

Ourself • A VR horror experience about empathy and seeing through someone else's perspective: by wearing their face as a mask

- Modeled room décor in Maya, led the level design and room layout

Potion Maker • An AR Passthrough experience where guests work as an employee, brewing orders placed by needy customers

- Developed shaders for potion liquids, wrote an experience map for intended player action, with minimum explicit instruction

Cyber Dive • A 30-45 second cyberpunk base jumping VR and Icaros Pro experience, developed in one week

Unity • Big Dark House Project

Personal Project

Pittsburgh, PA

Nov 2021 - Aug 2022

- Designed and implemented a JRPG-style combat system, with the aim of better representing the tempo of melee combat
- Animated main character run cycle and idle state, then implemented them using unity animator
- Implemented a unique sprite shader that utilized Unity URP's native lighting to cast realistic 3D shadows from a sprite

PROFESSIONAL EXPERIENCE

Freelance Pixel Artist

Self-Employed

Pittsburgh, PA

March 2019 - Aug 2022

Collecting clients from Twitter and Reddit, I delivered art assets ranging from concept art, to backgrounds, to animated storybooks. My experience highlighted by crafting an animated backdrop for Kacey Musgraves' 2019 Red Rocks show on a two-day deadline.

Product Design Engineer • Knoll Inc.

Special Products Group

Hagerstown, MD

Sept 2019 - May 2020

Working above a team of drafters and prototype craftsmen, my job was to collaborate with renowned designers to deliver their vision; meshing aesthetic expression with mechanical & electrical functionality

Sr. Mechanical Design Engineer • JLG Lift & Access Equipment

Oshkosh Corp. - Advanced Concepts Group

Hagerstown, MD

June 2015 - Aug 2019

Placed on small teams of multidiscipline engineers, my daily responsibilities involved the machinations and structural components of JLG's cutting-edge self-leveling and electrification projects, taking new ideas and making them a reality under tight time constraints