

Nicolas Williams

Education

University of Michigan - Ann Arbor, MI

April 2020

- B.S.E. Computer Science Engineering
 - Coursework in:
 - Data Structures & Algorithms
 - Linear Algebra
 - Optimization Methods
 - Operating Systems
 - Video Game Development
 - Computer Organization
 - Discrete Mathematics
 - Video Games in Education
-

Projects Portfolio: [NicolasDWilliams.github.io](https://github.com/NicolasDWilliams)

The Legend of Zelda (NES) Unity Remake (PC)

Fall 2018

- Authentically recreated the first dungeon in The Legend of Zelda (NES) using C# in the Unity engine
- Implemented a custom mechanic to launch and recall Link's sword, created a new room to highlight the mechanic

Dante's Descent

Fall 2018

- Collaborated with a multidisciplinary team consisting of an artist, audio engineer, and another programmer at a local game jam to create the title in under 48 hours
- Utilized project management tool HacknPlan to identify core features and ensure timely development cycles

Pipelined Processor Simulation

Winter 2018

- Developed a C program to compile and simulate the execution of LC2K assembly instructions on a pipelined processor
 - Employed shell scripting to automate unit testing and program verification
-

Experience

Electronics & Software Team Member

April 2017 - September 2018

University of Michigan Sensor Network Laboratory

- Collaborated with a research lab to design, test, and launch a passive wireless sensor platform for use in detailed sensing of various properties of the atmosphere
- Improved sensor performance through printed circuit board design modifications and algorithm optimizations using the C and C++ programming languages

Team Software Lead

Winter 2017

Michigan Engineering: Electronics for Atmospheric and Space Measurements

- Worked with a multidisciplinary team to construct and launch an Arduino controlled weather balloon carrying atmospheric sensors to record measurements within the troposphere
 - Debugged hardware issues through sensor unit testing and payload regression testing
 - Successfully launched prototype payload to an altitude of 90,000 feet while recording various atmospheric measurements
-

Skills

- Proficient: C++, C#, C, Shell Scripting
 - Basic: Python, Verilog HDL
 - Tools: Git, Unity, Blender, gdb, Vim
-

Extracurricular Activities

- Member of the International Game Developers Association Ann Arbor chapter
- Member of the game development student organization WolverineSoft
- Sidney J and Irene Shipman Scholar at the University of Michigan