

# DeAngelo Wilson

Software Engineer

## Personal Info

### Located

Chicago, Illinois

### Phone

630-248-5285

### E-mail

itsdeangelowilson@gmail.com

### Portfolio

<https://itsdlow.github.io>

## Languages

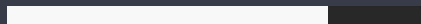
C++: 4+ years experience



C#



Python



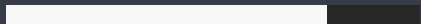
C



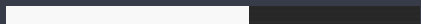
Swift



Java



Perl



## Skills

Multithreading, Linear Algebra, DirectX11, OpenGL, XAudio2, OOP, Design Patterns, UML Unity, Bash, JavaFX, Unit testing, J-Unit, Agile, MySQL, Ruby, php, YAML, Liquid, Scala, Git, Perforce, Visual Studio, Xcode

## Education

### DePaul University

2020 - Bachelor of Science in Computer Science: Software Development  
Cumulative GPA: 3.58

*Expected: Spring 2022*

2022 - Master of Science in Software Engineering: Real-Time Game Systems

## Experience

### DePaul University

*May 2019 - Present*

*Research Assistant*

- Researched in bioinformatics, specifically the field computational phylogenetics.
- Developed phylogenetic inference and analysis software tool, 'PhyloTools', written in C++, which integrates numerous 3rd party software and streamlines analysis.
- A member of DePaul's Computational Biology and Applied Bioinformatics Lab.

### DePaul University

*Sept 2020 - June 2022*

*Graduate Assistant - Tutor*

- Tutored DePaul University School of Computing students in various subjects:
  - Python, Java, discrete math, computer systems, C, C++, multithreading, database systems, unit testing, algorithms O( ), compiler design, linear algebra

### Western Digital

*Summer 2021*

*RAMP Intern - Software Engineer*

- Worked with internal tools for device level directed testing on the Servo Tools Development team.
- Created a general solution, in C++, to parse data from different clients connecting to a COM server. This enabled Python clients, reducing data-type handling speed by 25x.

## Projects

### Memory Allocator

*2022 Graduate Project*

- A cross-platform (Windows, Linux) memory allocator for multithreaded applications
- I designed this system taking inspiration from the Hoard memory allocator, making use fixed-heaps in addition to a 'MemorySystemThread' to manage memory.
- With the ability for inter-thread malloc()/free(), achieved times better than than the C++ default new/delete, however with more memory overhead

### Game Engine

*2021 Graduate Project*

- A game engine written in C++, making use of GLFW, an OpenGL graphics library.
- The engine supports 2D and 3D rendering, multiple cameras, and scenes. in addition to animation through skinning, which is offloaded to the GPU through compute shaders.
- The engine loads structured data resources through google protocol buffers, serialized through a separate converter application, also written in C++

### Audio Engine

*2020 Graduate Project*

- Developed a layer of abstraction on top of the Windows XAudio2 API, written in C++. This audio engine API managed memory resources, enabled asynchronous loading of .wav files, in addition to providing an interface to manipulate loaded .wav sounds.
- Implemented a multithreaded system, communicating through an Actor model design along with a handle system for resource protection.
- Developed a simple, expandable API, for use by game programmers.

### Tetris - GDSD

*2020 Graduate Project*

- Co-lead a globally distributed software development partitioning project, to remake Tetris.

### Zombie Survivor AI

*2020 Graduate Project*

- Developed artificial intelligence for a group of 4 survivors in a zombie wave survivor game written in C# using the Unity game engine.
- Implemented complex, independent decision trees for each survivor along with Points of Visibility on top of Unity's NavMesh system enabling A\* pathfinding