DeAngelo Wilson

Software Engineer

Personal Info

Located
Chicago, Illinois

Phone
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E-mail
itsdeangelowilson@gmail.com

Portfolio
https://itsdlow.github.io

Languages

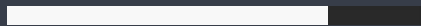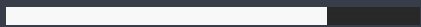C++: 4+ years experience

C#

Python

C

Swift

Java

Perl

Skills

Multithreading, Unreal Engine, Networking, Linear Algebra, DirectX11, OpenGL, XAudio2, OOP, Design Patterns, UML, Unity, Bash, Agile, Unit testing, MySQL, Ruby, php, YAML, Liquid, Scala, Git, Perforce, Visual Studio, Xcode, Jenkins

Experience

Studio369
Engine Programmer — *July 2022 - Present*

- Worked in UE4/UE5 on a multiplayer VR Arena and MMO combined arms combat games.
- Autonomously profiled and optimized core systems, managed Jenkins build pipelines, created and refactored systems for use by designers, artists, and engineers, among various other self-motivated, managerial responsibilities.
- Implemented networked destructible fpliage system via network-manager and FastTArrays
- Extended and leveraged UE systems: ReplicationGraph, WorldComposition, Navigation. Including creation of a replicated poolable system and dynamic streaming solution.
- Responsible for upgrading two games from Unreal Engine 4 to Unreal Engine 5
- Orchestrated studio-wide adoption of Unreal Engine's Gameplay Ability System (GAS)

Western Digital
RAMP Intern - Software Engineer — *Summer 2021*

- 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.

DePaul University
Graduate Assistant - Tutor — *Sept 2020 - June 2022*

- 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

Research Assistant — *May 2019 - June 2022*

- 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.
- Lead author in Journal of Computational Biology publication (03/2023)

Projects

Memory Allocator
2022 Independent Study

- A cross-platform (Windows, Linux) memory allocator for multithreaded applications
- I designed this system taking inspiration from the Hoard memory allocator, making use of 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 seperate 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.

Education

DePaul University

2022 - Master of Science in Software Engineering: Real-Time Game Systems
Cumulative GPA: 3.89

2020 - Bachelor of Science in Computer Science: Software Development