

COLBY SULLIVAN

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EDUCATION

Bachelor of Arts in Computer Science

Southwestern University

- Vice President, Computer Science Club

May 2024
Georgetown, TX

Masters in Interactive Technology

Southern Methodist University

August 2025 - Present
Dallas, TX

TECHNOLOGY EXPERIENCE

Information Technology Support Specialist

Appttronik

Jul 2024 – August 2025
Austin, TX

- Served as IT support specialist on a 3-person team in a humanoid robotics company, providing day-to-day technical support and helping maintain reliable operations across users and systems.
- Acted as the sole Linux support resource, troubleshooting, maintaining, and supporting Linux-based systems critical to engineering and development workflows.
- Developed and documented provisioning processes for custom embedded machines, improving consistency, setup efficiency, and supportability for specialized robotics hardware.
- Supported overseas operations as a key IT point of contact, helping coordinate technical assistance across time zones and ensuring issues were addressed efficiently for international teams.

Information Technology Support Specialist

Southwestern University

August 2022 – 2024
Georgetown, TX

- Maintain computer infrastructures of the university and assist new users with hardware and software issues
- Enhanced product security systems to meet 100% of client requirements
- Developed solutions for software/hardware compatibility

RELATED PROJECTS

Custom 3D Game Engine (C++, DirectX 11)

- Built a 3D game engine from scratch in C++ with a DirectX11 renderer, supporting model loading, runtime-compiled HLSL shaders, and switchable orthographic/perspective cameras via normalized viewports
- Authored diffuse lighting shaders with directional sunlight, configurable ambient fallback, and TBN (Tangent-Bitangent-Normal) normal mapping using a 60-byte Vertex_PCUTBN format
- Implemented a configurable pipeline with independent depth testing, alpha/additive blend modes, and rasterizer state control (solid/wireframe, back-face culling), using state caching to minimize redundant GPU calls
- Built a GPU buffer system (vertex, index, constant buffers) with dynamic resizing and a resource cache layer for textures, shaders, and models to eliminate redundant loads across scenes
- Wrote a custom OBJ loader that parses positions, UVs, and normals, deduplicates vertices via hash map, and outputs indexed geometry

Hamster Ballin' (Unreal)

- Collaborated with a 40+ person team using Scrum methodology to coordinate cross-discipline development across design, art, and engineering
- Inherited and extended the prototype item system for a team-built cart racer, refactoring core mechanics into a maintainable, designer-friendly framework.
- Built a track tooling system handling AI behavior, item usage, and racer positioning, exposed through the editor's details panel for rapid in-editor iteration.

Illuminary (Unity)

- Collaborated on a small team of 4 to build a 2D Metroidvania, designing and implementing core systems including modular menu, audio, and movement systems supporting responsive platforming traversal and polished UI flow
- Built an unlock/progression system gating abilities and areas to enable Metroidvania-style exploration and backtracking

SKILLS

Languages: Java, C, C++, C#, Python, SQL, HTML

Developer Tools: Unity, Unreal, Godot, Git, Perforce, GitKraken, VS Code, Visual Studio, IntelliJ, Eclipse, Microsoft Azure, Flask, AWS, Django

Libraries: pandas, Raylib, NumPy, Matplotlib, SFML, OpenGL, GLPK