Ryan V. Ngo

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EDUCATION

San Diego State University *2023 - 2025*
Bachelor of Science - BS, Computer Science *Magna Cum Laude - GPA: 3.75*

San Diego Miramar College *2019 - 2023*
Associate of Science - AS, Computer and Information Sciences *GPA: 3.69*

PROJECTS EXPERIENCE

Voxel Game Engine *June 2025 - Present*

- Developing a voxel based game engine in C++ with OpenGL, GLEW and GLFW
- Implemented real-time debugging and performance monitoring tools using Dear ImGui
- Managed project dependencies and build configuration with vcpkg and CMake
- Improved runtime efficiency through memory optimizations and data structure tuning

rem8C++ *June 2025*

- Built a CHIP-8 emulator desktop application in C++ using Dear ImGui with an OpenGL and GLFW backend
- Verified emulator components and accuracy with test ROMs and unit tests using GoogleTest
- Used vcpkg and CMake to handle project dependencies and build configuration
- Created a simple CI/CD workflow with Github Actions to automate builds and run tests before releases

SRNAFNet *April 2025 - May 2025*

- Designed and implemented a machine learning model in Python with Pytorch and NumPy to perform AI image upscaling
- Monitored training, validation, and testing metrics with TensorBoard
- Achieved faster inference times than similar models while maintaining comparable quantitative performance on benchmark metrics (PSNR, SSIM)
- Coordinated a small team to outline project goals, review recent research, and integrate model components

CSERIO *August 2024 - December 2024*

- Created a portable C library for reading and writing SER format image sequence files
- Built testing utilities to check library reliability across varied use cases
- Authored documentation with installation guides, usage examples, and API references for developers

SKILLS

Languages: C++, C, Python, Go, Java, HTML, CSS
Tooling: Git, Github, CMake, Make, vcpkg, Valgrind
Libraries & Frameworks: OpenGL, GLFW, PyTorch, NumPy, GoogleTest, Check
Platforms: Linux, Windows