Tristan Cox
https://github.com/nice-sprite
https://nice-sprite.github.io

EDUCATION

The University of Texas at Dallas, Dallas, TX   August 2024
Bachelor of Science, Computer Science

Relevant Coursework
3D Computer Graphics, Compiler Design, Computer Architecture, Linear Algebra, Discrete Math, Operating Systems, C/C++ Programming on Linux

SKILLS
Programming Languages
        C++, Rust, JavaScript, Lua, HLSL/GLSL

Graphics API
        Vulkan, DirectX11, OpenGL

PROJECTS
HUD UI Editor
        Leveraged knowledge of game subsystems to design and implement a GUI editor for UI tooling
        Implemented efficient rendering with DirectX11 for stable performance
        Reduced UI design iteration time and workflow friction by ~80%

GUI Rendering Backend
        Integrated BGFX renderer for the popular rust user interface library "egui"
        Supplied platform independent user input and windowing with the winit library
        Solved performance issues by profiling with Tracy and inspecting GPU pipeline with RenderDoc

Graphics Overlay and Extraction Tool
        Utilized static and dynamic binary analysis techniques to implement code injection and graphics
        Developed C++ DLL and code injector for a Call of Duty: Black Ops tool that extracts game asset data
        Leveraged React and AWS knowledge to display the extracted data in a searchable table format

Custom Heads-Up-Display System
        Decompiled and analyzed Lua scripts to become highly proficient with an undocumented API
        Implemented a remastered version of the Call of Duty: World at War Zombies UI using the new API
        Contributed to custom map content by guiding map makers on how to use new Lua API by example