Nicholas Madsen Fuller

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TECHNOLOGY SUMMARY

· **Languages**:   C/C++, C#, Python, Lua/HavokScript, JavaScript
· **Toolkits**:   Web frameworks, DirectX, boost, Havok, social media APIs, WPF, Qt, various GUI kits
· **Game Engines**: Unity (extensive), Unreal Engine 4 (moderate), Custom (extensive)
· **Networking**:   WinSock, SmartFox, RakNet, Photon, Lidgren, ASP.NET

Education

BS IN COMPUTER SCIENCE IN REALTIME INTERACTIVE SIMULATION | DIGIPEN INSTITUTE OF TECHNOLOGY

· Refined prior skills in the areas of systems architecture, game engines, tools, and network engineering.

· Won the IndieCade '14 Audience Choice Award for *Sunder*.

· Was lead behind the *Mocha Engine* – one of the most feature-complete game engines to have been produced at DigiPen.

Experience

SYSTEMS ENGINEER | HANGAR 13 | SUMMER 2016 – PRESENT

· Developed systems and tools for content creation, particularly in the areas of:

   o **Visual scripting:**   Developed new visual scripting runtime and developed a full tool stack: including editor, visual debugger, maintenance tools, etc.

   o **Networked world editing:** Designed networking layer to connect running game engine and built runtimes to interface. Produced a 'live edit' system in which designers see changes in-editor reflected in-game instantly.

   o **Debugging tools:**   Replay system, Havok Script debug tools, visual script debugger

   o **Build Tool:**   Created a set of tools for publishing final game content to Steamworks. I was also responsible for the content managing/packaging of Mafia III's DLCs.

GAME PROGRAMMER | STRANGELOOP GAMES | SUMMER 2015 – SPRING 2016

· Built networking backend for *Eco,* a multiplayer Unity Kickstarter game.

· Assisted in gameplay programming and art tools development.

· Designed and built systems for user modding. Interfaced with the Eco modding community to fix bugs, implement new features, etc.

ENGINE PROGRAMMER | DIGIPEN TEAM MOCHA | FALL 2013 – SPRING 2016

· Over 3+ years, designed, developed, and maintained multiple technically complex, large-scale game engines.

· Went above and beyond the scope of academic game engine development to really refine and push my skillset.

· Major features I implemented:

  · **Tools**:   Property Inspection, Asset Management/Server, Perf. Visualization, Visual Scripting, Animation Editor

  · **Systems**: All core engine architecture, meta-reflection, persistence (serialization), bound most scripting languages

  · **Support**: Fiber-based async core, job-based threading library, multi-user networked scene editing, remote rendering

SUNDER

· Two-player co-op experimental puzzle platformer where players view the same screen but see different worlds.

· **Awards: IndieCade '14 Audience Choice Award**

SUBJECT [REDACTED]

· Co-op VR horror game in which only one of the players is wearing a VR headset.

· Built on my engine, I lead, designed, and developed Subject Redacted with a large team of designers and programmers.

· **Featured at PAX2015**