Dane Curbow

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Software Engineer

Summary

Skilled in object-oriented design approaches with experience working on teams of 3+ developers for a full development cycle including design, proof of concept, prototyping, interface implementation, testing, debugging, and maintenance.

Available For Summer Internship 2012

Technical Skills

Languages	C/C++(Proficient), GLSL
Tools	SVN, Mercurial, Doxygen, Visual Studio and associated debugging tools
APIs	CPython, OpenGL, DirectX, XInput, TinyXML
Scripting	Python
Math	Linear algebra and computational geometry for vector math and spatial transformations
Misc.	Blender

Selected Projects

***Rhinopocalypse*: (C++, Python, CPython, DirectX, TinyXML, Wwise)**   **June 2011 - Present**

3D rhino voxel destruction game, 6 Developers / 3 Artists

Scripting / Tools

- Run-time C++ to Python class binding using CPython with no prior knowledge of scripting or python
- Implemented Python to C++ intercommunication using a subscription messaging model
- Python objects able to access game object components by name
- Implemented in-game level editor supporting voxel terrain deformation, voxel object manipulation, and dynamically generated tools tray

***Cat Nap*: (C++, DirectX, TinyXML, FMOD)**   **September 2010 - April 2011**

2D feline platformer, 3 Developers

Engine Architect / Technical Director

- Wrote core engine framework including abstract object creation, management, and deletion
- Developed system architecture, component management, messaging system, and input system
- Implemented XML serialization to load levels, assets, and define UI elements
- Wrote 2D graphics engine including shaders, sprites, UI system, debug drawing, and camera
- Adopted additional areas of responsibility to meet milestone goals: graphics, menu management, and level production

***Ferguson and the Half Robot*: (C, FMOD)**   **January - April 2010**

ASCII space pirate adventure RPG, 3 Developers

Tools / UI / Producer

- Implemented stand-alone level editor with placement of static and dynamic sprites
- UI system consisting of main menu, pause menu, character sheets, and message boxes
- Gameplay logic for wandering NPC characters including interactions
- Wrote entire audio system using FMOD

Education

Digipen Institute of Technology, *Redmond, WA*   **May 2013**

Bachelor of Science in Computer Science in Real-Time Interactive Simulation