SCOTT HILBERT
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Professional Experience

Corsair EDA, Inc.   January 2010 - Present
Contractor
- Developed custom web application for managing lottery tickets for individuals and lottery pools, including aggregating winning number feeds and notifying users of their winnings
- ~16,000 lines of Python

Skytrex Systems, LLC   August 2009 - July 2010
Contractor
- Contributed to development of flight planning iPhone application for general aviation pilots
- Implemented feature to fetch, parse, and display temporary flight restriction zones defined by the FAA, involving boolean operations on arbitrary 2D shapes (Objective-C / iPhone)
- Implemented tool to define boundaries and projection basis information for chart images (C# / PC)

Vicious Cycle Software, Inc.   Summer 2007, 2008, 2009
Junior Engine/Tools Programmer
- Wrote photon mapping system for real-time global illumination prototype
- Implemented mesh level-of-detail system for Vicious Engine 2
- Implemented 3D modeler-style transform widgets in Vicious Editor
- Added polish features (e.g. undo, multiple selection) to shader graph editor
- Wrote faster UV unwrapping system for map geometry
- Implemented state transition system for destructible physics objects
- Implemented asset reporting system to track down wasteful models, textures, shaders and sounds

Personal Projects

Platformer
- XNA sidescroller game
- Runs on PC or Xbox 360
- WinForms editor with tile & entity editing, full undo/redo, automatic image reloading
- ~25,000 lines of C#

Fallen Elements II
- First-person shooter
- Integrates OGRE for rendering, Newton physics, Python scripting, OpenAL sound
- ~30,000 lines of C++ and Python

SHilScript
- Embedded scripting engine with C-like syntax
- Used in several games and applications released by others

Education

North Carolina State University   December 2009
- B.S., Computer Engineering & B.S., Electrical Engineering
- Major GPA: 4.0/4.0; Overall GPA 3.45/4.0
- Graduated Cum Laude; Dean's List (Perfect 4.0) Spring 2007 - Fall 2009
- Senior project: Wireless digital water flow controller using 802.15.4 and variable-speed Pentair pool pump

Technical

- Languages: C/C++ (12 years), Python (8 years), C# (7 years), Cg/HLSL, Java, Objective-C
- Technologies: STL, Direct3D, OpenGL, Win32 API, networking (sockets), .NET, XNA, Python C API, Newton physics, OGRE, OpenAL, wxWidgets, Django
- Tools: Visual Studio, Subversion, 3D Studio MAX, Photoshop, SWIG, Yacc/Bison, ANTLR
  Platforms: Windows, Linux, Xbox 360, iPhone