Douglas Kavendek

442 Braceland Drive, Exton, PA 19341
908-489-7718
doug.kavendek@gmail.com

Objective: To obtain a full time position working in the field of computer science, with an emphasis towards graphical simulations, real-time rendering, or game development.

Portfolio: Online: **http://kavendek.com/portfolio**

Education: **Stevens Institute of Technology**, Hoboken, NJ
MS in Computer Science (GPA 3.8)
BS in Computer Science (GPA 3.5)

Skills: **Languages/APIs:** C; C++; OpenGL; Win32; SDL; PHP; MySQL; CSS; HTML; XML
Operating Systems: Windows; NetBSD; Linux; DOS
Software: Visual Studio 6.0/2003/2008; EditPlus; gcc/g++/make; Valve Hammer Editor; Pico; Adobe PhotoShop 7.0; Persistence of Vision Raytracer 3.5; Moray 3.5; Milkshape 3D; Blender; AutoCAD

Experience:

Software Engineer, Syandus **November 2007 – Present**

- Prototyped, and currently developing, a software distribution system involving database validation, account management, extensive Win32 skinning and animation, and interfacing between different technologies such as an online session manager, VOIP, and our main 3D application.
- Created an interactive simulation for a pharmaceutical medical education simulation, integrating many animated 3D and 2D assets.
- Created and modified components of the current software framework, including mainly an assistive guide.
- Rewrote company's web site, first in HTML and later in flash and actionscript, along with other flash front-ends.

Graduate Assistanceship, Stevens Institute **January – December 2006**

- Researched weathering of polygonal models using variations on photon mapping and fluid simulation.
- Created user environment for viewing and interacting with models.
- Designed binning structure for more efficient collision detection.
- Integrated vector-field subdivision code to model fluid flow.
- Implemented several visualizations of vector fields.

Capstone project, Stevens Institute **October 2004 – May 2005**

- Lead graphics programmer for real-time 3D role-playing game.
- Designed and developed terrain engine, including level-of-detail transitions, polygon smoothing, and multi-texturing.
- Created system for populating terrain with towns, paths, and decorative models.
- Implemented dungeon rendering engine and integrated dungeon generator.
- Integrated animated 3D model rendering code.

Summer Scholars research, Stevens Institute **Summer 2004**

- Researched photon mapping and non-photorealistic rendering.
- Modified source code for Persistence of Vision Raytracer (POV-Ray) to provide more direct control over photon mapping for artistic purposes.
- Wrote plug-in for modeling program Moray to utilize changes to POV-Ray.

Real-time Game Design class project, Stevens Institute **Spring 2004**

- Created real-time 3D space-flight game.
- Programmed level-generation structure and enemy AI using flocking behavior.
- Integrated model rendering code and Coldet collision detection libraries.

Awards: Eagle scout; Stevens Institute of Technology Scholar of Excellence; Secretary of the Navy Scholastic Leadership Award; Edward Bloustein Distinguished Scholar