

Douglas Kavendek

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

Portfolio: <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
- Operating Systems: Windows; NetBSD; Linux; DOS
- Software: Visual Studio 6.0/2003/2008; EditPlus; gcc/g++/make; Valve Hammer Editor; Pico

Experience:

- Software Engineer, Syandus, November 2007 – Present
 - Planned and developed a software distribution system involving database validation, account management, online event scheduling, and extensive Win32 skinning and animation. It also required interfacing between different technologies such as a remote session manager, VOIP, and our main 3D application. Additionally wrote all web-based management and user account tools.
 - Created and updated interactive modules for multiple pharmaceutical medical education simulations, integrating animated 2D and 3D assets, and ensuring reliable remote synchronization.
 - Created and updated components of the development platform, including an interactive guide system and much of the existing user interface framework.
 - Recreated company's web site in flash and actionscript, along with other flash front-ends and video players.
- 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; Sec. of the Navy Scholastic Leadership Award; Bloustein Distinguished Scholar