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My objective is to work on top quality games, implementing cutting edge graphics.

SKILLS

My skills include computer graphics (including rendering, advanced level-of-detail, OpenGL, matrices, and quaternions), rigid-body physics, splines and spline patches, path finding, implicit surfaces, script language implementation, system administration, C++, object oriented design, rapid knowledge absorption, and more math than will ever be useful.

EDUCATION

University of California at Berkeley, Ph.D. program in Mathematics. Will complete in May 2003.

Reed College, B.A. in Mathematics, 1994. Graduated in three years, Phi Beta Kappa.

GAME INDUSTRY EXPERIENCE

Flintstones Bedrock Bowling (**Adrenalin Entertainment**) Released late 2000
(1998–1999) Implemented physics engine for Windows and Playstation. Objects interact with arbitrary level geometry.

Brunswick Circuit Pro Bowling (**Adrenalin**) Released second quarter 1998
(1997) Implemented physics simulation to model the interaction between the ball, lane, and pins. For Windows, Playstation.

Vampire: The Masquerade (**Adrenalin**) Unreleased
(1996) Rewrote graphics and implemented pathfinding, sound compression, and a scripting system. Graphics techniques included sprite scaling, z-buffering, RLE, alpha channel, clipping, and dirty rectangles. For DOS.

OTHER EXPERIENCE

My dissertation *Contour Finding Using C^1 Data* includes many spline techniques, root finding, interpolation, and implicit surfaces.

Published *Fast View-Dependent Level-of-Detail Rendering Using Cached Geometry* in IEEE Visualization 2002.

Consultant (**Mathematical Sciences Research Institute**) Jan 2000 to Dec 2001
Helped administer a network of approximately 140 machines, mostly Linux. Wrote scripts in Python to automate various tasks.

Teaching Assistant (**UC Berkeley**) Aug 1995 to May 2001
Taught Computer Graphics, Calculus, and Discrete Math.

Illustrated the book *Geometry of the Quintic* (1994).

Programmer (**Useful Software**) 1987 to Aug 1995

Programmed database applications for DOS and Windows. Wrote commercial programs including *Sharkware Address Book* and *Books Cards & Labels for Windows*.

RESEARCH PROJECTS

Object-oriented scripting language (2001)

C++ 3D engine demo using BSP trees and dynamic lighting (1994–95)

ACADEMIC HONORS

Placed in the top 50 on the Putnam Exam (1993). Presented undergraduate research on Magic Squares at a joint meeting of the AMS and MAA (June 1994). Won the Lloyd-Williams Scholarship and a Commendation for Excellence by the President of Reed College, in 1992–93 and in 1993–94.

INTERESTS

Juggling, unicycling, science fiction, anime, and ballroom dancing.