

# Dave Kircher

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## EDUCATION

DigiPen Institute of Technology

(2001 – Present)

- Bachelor of Science in Real-Time Interactive Simulation (Computer Science). Graduate April 2005.

## PROJECT EXPERIENCE (Teams of 4-8 at DigiPen)

**Technical Director and Programmer for “Narbacular Drop” (2004 - Present)**

Working on advanced graphical effects (dot3 bump mapping, dynamic textures, realistic alpha blending, character animation with vertex blending) as well as unique game technology known as “The Portal System” which gives players a seamless viewport between 2 points in 3D Space. Worked with a team of 4 artists to integrate their animating characters from 3D Studio Max into the game.

**Game Designer and Programmer for “Desert Derby” (2003 - 2004)**

Designed this futuristic desert racing game. Implemented almost all graphical elements including a dynamic lighting system with support for an arbitrarily high number of point lights, and 3D model loading. Implemented the basic networking system using UDP to find other games on the LAN and basic entity system to have miscellaneous objects perform assorted tasks in a synchronized manner.

**3D Lead and Programmer for “Gun Fu: Disco of Crime” (2002-2003)**

Designed the 3D overworld for the game and created the graphics engine from scratch using Direct3D.

**Technical Director for “The Whimsical Gift of Wang: The Space Monkey” (2001-2002)**

Worked on 2D DOS-BASED color graphics framework and managed module integration between our team of beginner programmers.

## TECHNICAL EXPERIENCE

- **Computer languages:** C/C++ (10 years).
- **Graphics programming:** Direct3D (3 years), OpenGL (1 year), Windows GDI (4 years).
- **User interface programming:** GUI (2 years), text-based program interfaces(6 years),
- **Networking programming:** 2 years, sockets based.
- **Server programming:** 1 year, multi-threading, client-server synchronization, and global data sharing.
- **Web programming:** 3 years, Flash “Action Script” programming, HTML (6 years).
- **Operating systems:** Windows 9x/2K/XP (9 years), Linux (misc. distributions) (4 years)
- **Miscellaneous:** Microsoft Visual Studio 6.0 (6 years), Visual Studio .NET (1 year), 3D Studio Max (2 years), Adobe Photoshop (3 Years).

## SKILLS

- **Graphics implementation:** Did graphics work for every game worked on. Understand the key concepts and can be an asset for any type of graphics related programming. Focused primary on Direct3D implementations but have experience with OpenGL as well.
- **Tools creation:** Created several windows-based tools for facilitating game production.
- **Teaching:** Assisted in teaching high school students the fundamentals of C++, 2 months a year for 3 years, and have also given numerous presentations to my peers on miscellaneous programming tricks and system design topics.
- **Technical Design Document creation:** Wrote 2 TDD’s for student projects.
- **Game Design Document creation:** Wrote 2 GDD’s for student projects.