Charles Berger

14636 NE 38th St., Apt. #1040
Bellevue WA 98007

Cell: (260) 668-9875
E-mail: cberger@digipen.edu
Website: www.thefinalchapters.com

Objective	A job as a Software Development Engineer working on the front-end of games.
Summary	A patient, energetic individual who never gives up on a programming challenge.
Highlights	➔ Architected and coded three C++ games from concept to completion ➔ Created a robust core game engine designed around ease of use ➔ Developed an extensive system of macros to simplify my team's game development process ➔ Experienced in a broad range of programming disciplines including C, C++, Flash ActionScript, DirectX, DLL development, and Windows PC ➔ Built a powerful architecture that allows for runtime code modification and the dynamic rebuilding of object definitions using DLLs ➔ Developed a dynamic typing structure for generic entities that allows for the transparent access of data by all code modules ➔ Architected the 3D C++ game, *Flight,* in addition to implementing behaviors for engaging gameplay ➔ Implemented the logic portion of a program that solves Minesweeper ➔ Worked three summers as a game tester at Nintendo for regression, stress, and functional testing using proprietary bug tracking software ➔ Eagle Scout

Skills

C/C++ (5 years)	Visual Studio 2005/2008/2010	Finite State Machines	Macros
Flash ActionScript 2.0/3.0	Tortoise SVN	A* Pathfinding	DLL Development
DirectX/Windows PC	3D Physics (MPR, SAT)	Fuzzy Logic	Debugging

Projects

Lunaris **Programmer (Technical Director, Lead Architect)** **Senior Game (12 mo.)**

- ➔ Developer on a team with 6 developers and 1 designer, creating a C++ multiplayer network game
- ➔ Implemented a dynamic architecture with singletons and generic entities
- ➔ Developed a dynamic typing system that also allowed dynamic rebuilding of object definitions using DLLs
- ➔ Built a profiler and various basic engines and objects to act as templates for other developers to use

Flight **Programmer (Technical Director, Lead Architect, AI Developer)** **Junior Game (12 mo.)**

- ➔ Developer on a team with 4 developers and 4 artists, creating a 3D C++ multiplayer game
- ➔ Designed and coded a component-based architecture and game engine
- ➔ Developed control and camera system around effective movement and user experience
- ➔ Developed weapons system and homing behaviors for missiles and mines

Toys **Programmer (Technical Director, Lead Architect, Physics Dev)** **Sophomore Game (12 mo.)**

- ➔ Developer on a team with 4 developers, creating a 2D side-scrolling action platformer
- ➔ Architected the game engine around a single object type and wrote debug tools that allow for extensive testing
- ➔ Wrote a stress and regression test with bots that variably attempt to complete the game
- ➔ Implemented a tile-based physics and collision engine with multiple degrees of slope

Sonic Platformer **Solo Developer** **Independent Project (3 mo.)**

- ➔ Created a 2D Canabalt-style flash game (up to first playable level) based around mouse control

Awesome Physics **Solo Developer** **Senior Project (3 mo.)**

- ➔ Built a 3D physics engine from scratch with my own architecture using MPR and Impulse-based resolution

Employment

Nintendo (through Aerotek Agency)	Game Tester	June-Aug 2008, May-July 2009, May-August 2010

Education

DigiPen Institute of Technology, May 2011

B.S., Real-Time Interactive Simulation (Computer Science), Mathematics Minor, Physics Minor, 3.85 GPA (4.0 scale)