Spencer T. Parkin

2113 S. Claremont Drive
Bountiful, UT 84010
(801) 970-4578
spencertparkin@gmail.com

OBJECTIVE

A position in the field of software engineering with special interests in computer graphics and user interfaces, preferably in the gaming industry.

EDUCATION

Bachelor of Science, Mathematics
Weber State University, Ogden, UT, Graduated 2007
Major: Mathematics
Minor: Computer Science
Graduated High School 2001

COMPUTER SKILLS

Languages & Software: C/C++, Lua, C#, Java, Assembly, HLSL, Perl, Git, OpenGL, MFC, wxWidgets, Qt, cURL, DevStudio.
Operating Systems: Windows, Linux.

EXPERIENCE

Programmer 2012-2016
Avatar Tools Team, Programming Department, Disney Interactive

- Developed new tools to increase team productivity. E.g., Custodian – a wizard program designed to lead the user through a set of esoteric steps; Emu – a tool presenting its users with a visual programming language used to create executables for our engine run-time VM.
- Maintained existing tools. I.e., fixed bugs, added new features, optimized performance, improved visuals.

Associate Programmer 2007-2012
Programming Department, Disney Interactive

- Developed particle authoring tool with live-authoring features.
- Implemented lens-flare system.
- Helped port old particle system to new renderer.

Lab Aide 2003-2007
Worked as a lab aide to pay for books during the college years.

Level 1 Programmer 2001-2002
UI Programming, Acclaim Entertainment

- Worked with artists and designers as sole programmer on main front-end user-interface for Legends of Wrestling II.

Programming Intern 2000-2001
FX Programming, Acclaim Entertainment

- Worked on the particle system. Implemented blood/sweat splatter for Legends of Wrestling I and various other particle effects.
- Implemented body-part resizing subroutine for create-a-wrestler feature.

PROJECTS

I was involved in the following projects, sorted by developer.

Disney Interactive
Bolt, Toy Story 3, Cars 2, Infinity 1, Infinity 2, Infinity 3.

Acclaim Entertainment
Legends of Wrestling I, Legends of Wrestling II.

PERSONAL PROJECTS

The following are computer programs I've written out of personal interest. Source code for all of these projects can be found here: https://github.com/spencerparkin?tab=repositories

- **CalcLib** – A static library providing numeric and symbolic calculation support. Unlike most calculators, this one understands geometric algebra.
- **GAVisTool** – Built upon CalcLib, this is a tool for exploring and experimenting with conformal geometric algebra. It also utilizes a BSP-tree to do real-time alpha-sorting.
- **GALua** – A Lua module that exposes the capabilities of CalcLib.
- **CSharpMaze** – A rectangular and circular maze generator written in C#.
- **ChineseCheckers** – A wxWidgets-based application utilizing OpenGL's selection mechanism. It is also multi-player as it can host and connect to a game session.
- **RubiksCube** – Another wxWidgets-based application utilizing OpenGL's selection mechanism. Any Rubik's Cube of degree 3 or higher can be simulated. An algorithm is provided that can find a solution to any such scrambled cube. The solution sequence is animated.
- **ImageGenerator** – A multi-threaded image generator that can generate fractals and ray-trace scenes specified in XML. It can also render video clips.

PUBLICATIONS

The following publications are given in chronological order.

- Parkin, S. (2014). The Mother Minkowski Algebra of Order M. *Advances in Applied Clifford Algebras*, 24(1), 193-203.
- Parkin S. (2014). The Intersection of Rays with Algebraic Surfaces. *Advances in Applied Clifford Algebras*, 24(3), 309-815.
- Parkin, S. (2015). Versors That Give Non-Uniform Scale. *Advances in Applied Clifford Algebras*, 25(1), 219-225.
- Parkin, S. (2015). An Introduction To Geometric Sets. *Advances in Applied Clifford Algebras*, 25(3), 639-655.

REFERENCES AVAILABLE UPON REQUEST