Resume of Jim Brooks Software Engineer

PDF/DOC brief resume LinkedIn profile e-mail

Cover Letter

Location: Orlando, Florida

Current resume and email address is at: http://www.jimbrooks.org/web/misc/resume.html
(Internet version of my resume is obscured)

Sr. Software Engineer experienced in:
- **Google Android apps**.
- **Game programming**. (XBOX 360, Android)
- **3D graphics**. (3D engine design, OpenGL, shaders, OpenSceneGraph)
- **Flight simulators**. (full-up simulators, procedures trainers)
- [past] Internet (BSD sockets, Java client apps, UNIX/C++ server apps)
- [past] Linux system programming (device drivers, adapting kernel to new hardware)
- [past] 80x86 CPU architecture (assembly code, Intel "clone" projects)

Technical Skills

Programming languages: C++, Lua, Java, Python, design patterns
Graphics programming: 3D engine design, OpenGL, OpenSceneGraph, shaders
Shipped video game titles: F-42 Night Manta, EA Madden NFL 2007

Software Projects

Palomino Flight Simulator


videos magazine article [alt]
Developed the open-source Palomino flight simulator written in C++ and Lua.

2005...present Graphics/Game Programming

Game Developer - Palosim LLC

2010...present
Developed an action/arcade flight-sim game
inspired by Zaxxon, Blue Max, Warhawk, and F-19 Stealth Fighter.

Developed a 3D engine designed for small/mobile systems.
Significant parts of this engine are its scene-graph and collision-detection algorithms.

Simulation Software Engineer - (private)

2008...2008 - Jupiter, Florida
Task was to "make the graphics dazzling" of a ROV (submarine) simulator.
Used OpenGL shaders and developed fx for underwater
(underwater particles, ROV spotlights, fog fx varied by water depth).

Flight Simulator Software Engineer - (private)

2006..2007 - Melbourne, Florida
C++/graphics programmer for a military flight simulator (full-up procedures trainer).
Task was to develop new fx such that a pilot felt like he was flying thru a real atmosphere.
Used procedural-texture techniques to render in real-time very detailed clouds
comparable to Microsoft Flight Simulator X. Developed weather fx
such as lightning bolts and illumination of clouds from lightning flashes.
Graphics programming was done in C++, OpenGL shaders, and OpenSceneGraph (OSG).

Software Engineer II - Electronic Arts (Tiburon)

2005...2006 - Orlando, Florida
Game programmer for Madden NFL 2007 video game (XBOX 360, Direct3D) at EA/Tiburon.
3D graphics programming (camera control for animation, replaced Euler with matrix math),
online game mode (leaderboard, player stats), game screens/menus,
debugged many problems remaining from Madden 2006.
Created a "flying camera" cinematic fx for football events.
Created a special game mode used by artists to create TV ads for Madden.

2000...2005
Linux/UNIX Programming

Software Engineer - (private)

2003...2005 - Tampa, Florida
UNIX programmer. Developed Internet software on UNIX servers.

Sr. Software Engineer - (private)

2000...2002 - Silicon Valley and San Diego, California
Linux system programming. Wrote device drivers and
adapted the Linux kernel for new hardware boards.

1994...2000
Microprocessor Engineering

Sr. Software Engineer - Chromatic Research (ATI/AMD)

1997...2000 - Silicon Valley, California
Developed microcode for a RISC processor to emulate an x86 processor.
This "microcode" was really hidden RISC assembly routines that
emulated x86 CISC instructions and modes of the x86 architecture
such as exceptions and page mode.

Validation Engineer - Transmeta

1997...1997 - Silicon Valley, California
CPU verification. Wrote directed and randomized tests in x86 assembly.

Verification Engineer - Texas Instruments

1994...1997 - Dallas, Texas
CPU verification. Wrote CPU tests in x86 assembly language (TI Amazon 80586).
Wrote PC BIOS for system bring-up.
(TI, Transmeta, and Chromatic Research cloned Intel microprocessors
which succeeded technically but not commercially.)

Patents

Co-inventor of U.S. patent #5,826,084 [HTML, PDF] in microprocessor architecture (Texas Instruments).

Publications

Co-author of "Virtual Mode Extensions on the Pentium Processor" [alt] Electronic Engineering Times .