

David Bellhorn

Software Engineer

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Summary

Knowledgeable software engineer with 25-plus years of experience in C++ development. Extensive background in full software development life cycle including design, implementation, testing, debugging, and profiling.

Experience

Cubic Corporation **Senior Software Engineer** **Aug 2015 - Jun 2024**

- Updated the MQ-9 state machine with improved flight characteristics using C++ and Python within a proprietary flight simulator for the U.S. Air Force.
- Created state machines for team, squad, platoon, and company sized unit behavior in response to officer candidate orders within a virtual environment.
- Implemented pathfinding algorithms in C++ for realistic unit formation traversal across a simulated megacity built within Unreal.
- Helped developed a virtual Littoral Combat Ship in Unreal with C++ based grading logic for the U.S. Navy's Engineering Plant Technician course.
- Wrote tracking device firmware in C to generate geographic locations for real time synthetic airborne surveillance video feeds during live training exercises.
- Created a C# app which calculates hourly sun positions for a requested date.
- Recorded eye movement and EEG waveforms of participants in a virtual reality urban environment with C++ plugins for a project testing memory recall.
- Developed multiple software and embedded processor prototypes for DARPA.

Sony Online Entertainment **Programmer II** **Jul 2008 - Feb 2015**

- Helped develop DC Universe Online massively multiplayer role playing game.
- Implemented gameplay systems with C++ on a Linux server.
- Created user interface elements in Unreal and supporting C++ code base.

Edge of Reality **Senior Programmer** **Feb 2000 - Jun 2008**

- Helped develop a proprietary video game engine with C and C++.
- Worked with Nintendo and Sony real-time operating systems.
- Shipped 8 games including Tony Hawk's Pro Skater, The Sims, Spider-Man, The Incredible Hulk, and Pitfall: The Lost Expedition.

AMX Corporation **Programmer** **Jun 1998 - Jan 2000**

- Supported Synergy C++ software product providing remote scheduling and control of multimedia through proprietary hardware.
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Skills

Proficient: C/C++, C#, and Unreal Engine

Familiar: Python, Javascript, HTML, Lua, and Jenkins CI/CD

U.S. DoD Secret Clearance

Education

Keiser University	1997 - 1998	AS, Computer Science
Florida Atlantic University	1996 - 1997	Studied Computer Science
University of Central Florida	1992 - 1994	Studied Aerospace Engineering

Interests

President of the Austin Area Rocketry Group.

Developing a model rocket flight stability controller with C++ firmware.

Developing a model rocket recording altimeter device with CircuitPython firmware.