Arthur O'Dwyer

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Professional software engineer with 8+ years of work experience in C and C++. Simultaneously attentive to implementation efficiency and code clarity; significant experience in compiler and parser implementation.

Work Experience

Software engineer, MemSQL — C++11 — July 2013—
· Distributed, in-memory database compiling SQL to C++11
· Implemented JSON datatype and a fast Unicode collation algorithm
· Implemented a random SQL query generator in Python
· Reduced CMake/GNU Make build times from 1 minute to 1.5 seconds

Software engineer, Push Computing (acquired by **MobileIron**) — C++11 — Apr 2012–July 2013
· iOS mobile device management
· Used Objective-C 2.0 and C++11 in a production environment
· Wrote and released the N-way diff utility *difdef* under an MIT license

Designer, Colossal Cave: The Board Game — English — Nov 2010–July 2012
· Published with $15,000 raised from backers on Kickstarter

Contractor, ReadThrough.com — PHP — Sep 2011–Apr 2012
· Web backend to parse screenplays in several industry formats

Systems software engineer, compiler team, Green Hills Software — C++ — Aug 2006–Mar 2011
· Toolchain: Added end-to-end support for Unicode and x86-64
· Front-end: Added 40 new diagnostics for error-prone constructs in C and C++
· Linker: Maintained Green Hills' optimizing ELF linker and reverse inliner
· Testing: Automatic generation and reduction of test cases

Intern, Microsoft Visual Studio Tools division — C# — summer 2005
· Implemented a syntax-highlighting editor using VSIP

Intern, Spatial Integrated Systems — Matlab — summers 2003, 2004
· Drivers, camera characterization, and feature detection

Junior member, Robocup (CMU's AIBO soccer team) — C++ — 2002–2003
· Developed skateboarding routines for canine robots

Education

Carnegie Mellon University: University Honors, **Phi Beta Kappa** — May 2006
· Dual B.S. in **mathematical science** and **computer science**

Richard Montgomery H.S., Rockville, Md.: National Merit Finalist — May 2002
· International Baccalaureate diploma

Other Skills

Expert knowledge of **C and C**++, including C++11, and CMake. Familiarity with **assembly languages** including PowerPC, ARM, MIPS, and x86-64. Numerous other programming languages, including Objective-C, SQL, Python, Perl, ML, METAFONT, Fortran, Inform, and Befunge

Expert knowledge of the Green Hills toolchain and the MISRA coding standards

Conversant in Spanish. Minimal knowledge of Chinese

Avid Euro gamer. Expert **juggler** and club passer. Life Scout; Order of the Arrow