

Paul R. Potts
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SKILLS SUMMARY

- Over 10 years of embedded programming experience in C and C++
- Software development at levels ranging from assembly language, C drivers and firmware, multi-threaded client/server programs, and graphical user interfaces
- Experience across Macintosh, Windows, GNU/Linux, QNX, Java, handheld, and embedded platforms
- Polyglot programming: C, C++, Objective-C, Java, Scheme, Dylan, Haskell, and assembly languages
- Specialties in: digital audio, object-oriented design; documentation; instruction; improving legacy code

PART-TIME TEACHING ENGAGEMENTS

Saginaw Valley State University

Adjunct Instructor, August 2014 – Present (Semester will complete in December 2014)

- Taught CIS (Computing and Information Science) 333, System Software
- Developed lectures, handouts, programming assignments, and tests
- This course covers the fundamentals of computer architecture, assembly language programming, loaders, linkers, compilers, macro processors, and operating systems

PROFESSIONAL EXPERIENCE

Logikos, Fort Wayne IN (Remote)

Senior Software Engineer, September 2013 – September 2014 (Contract through Optomi LLC)

- Verified a medical device codebase (written in C) with IBM Rational Test RealTime
- Performed code inspection; reported bugs and issues; applied the team's coding standards
- Technologies: Analog Devices ADuCM350 "meter-on-a-chip" microcontroller (ARM Cortex M3), Micrium uC/OS-II RTOS, Segger emWin, QP (Quantum Platform) state machine framework
- Tools used: IBM Rational Test RealTime, IAR Embedded Workbench, Subversion; Bugzilla; Visual SourceSafe

Lectronix Inc., Lansing MI (3 Years Remote)

Senior Software Engineer, 2005 - 2013

- Wrote a server to integrate the Garmin GVN-52 with an RV Infotainment system via serial communications
- Developed code to manage system-wide audio settings and discrete I/O, ported to multiple products
- Developed driver code for TI DSPs and CODECs in a heavy truck Infotainment system
- Wrote TI TMS320C6727 DSP firmware for the Rockwell-Collins iForce system
- Tools used: TI Code Composer Studio; QNX Momentics IDE; Spectrum Digital XDS510 USB JTAG Emulator; Microsoft Visual C++; GNU/Linux; Python; Haskell; TWiki; Mantis; Subversion; Visio; Graphviz; BOUML

MicroMax, Inc., Canton MI (Onsite and Offsite)

Senior Software Engineer, 2005 (Contract/Temp)

- Tested a Sirius satellite radio receiver (SDARS/RDAR) at Visteon in Dearborn, MI for PAG (Premiere Automotive Group)
- As lead technical writer and editor, developed extensive documentation for a library of Delphi's embedded C code
- Tools used: MicroMax MxVDev; Visual Basic (Visual Studio .NET IDE); Visual C++; Ruby; Understand for C/C++; QA-C; Oasis Optolyzer; Rational ClearCase and ClearQuest; Word; Visio

Aardvark Computer Systems, Ann Arbor MI

Software Developer, 2001 - 2004

- Rewrote, debugged, and optimized DSP firmware (in C and assembly language) for the Direct Pro Q10
- Rewrote MacOS 9 PCI card drivers; wrote CoreAudio driver for MacOS X; developed cross-platform GUI
- Implemented build process and version control; coordinated overseas developers; ran beta-test program
- Tools used: Cygwin; Link-56K serial DSP debugger; Hewlett-Packard logic analyzer; Metrowerks CodeWarrior; Onyx Spotlight; Python; Gwydion Dylan; CVS; ViewCVS; Make; Installer VISE; Project Builder (now XCode); Qt GUI framework

InterConnect of Ann Arbor, Inc., Ann Arbor MI

Senior Consultant, 2000 - 2001

- Improved a server-side data-import process for web applications, using refactoring methodologies
- Wrote technical reports and presented them to clients
- Tools used: IBM VisualAge for Java; GNU/Linux; Oracle; JDBC; XML; Perl; CVS; Bugzilla; Visio; JVISION; TOAD; SQL; PostgreSQL; UML

Health Media Research Laboratory, University of Michigan Medical Center

Programmer/Analyst II and Systems Research Programmer III, 1996-2000

- Technology group leader: recruited, interviewed, supervised, trained, and evaluated technical staff
- Developed a survey engine for the Apple Newton; ported to Apple WebObjects using Java and GNU Kawa (Scheme)
- Led development of interactive multimedia, integrating the work of graphic designers and writers
- Co-developed an application to generate tailored health information booklets
- Co-designed internal QA process; gave presentations on software development topics
- Tools used: Macromedia Director; Adobe Photoshop; Quark XPress; TestTrack; Newton Toolkit; CodeWarrior (C++); AppleScript; Visual BASIC; Perl; Scheme (GNU Kawa); Java; XML; WebObjects; UML

Fry Multimedia, Ann Arbor MI

Software Engineer, 1994 - 1995

- Co-developed a CD-ROM business directory with a custom search engine, user interface, and compression algorithms
- Developed prototype Apple Newton and Macintosh applications
- Developed early commercial web sites using HTML and Perl CGI scripts; Java beta-tester
- Tools used: Visual C++ 1.5; CodeWarrior; MKS RCS; HTML; PGP; Perl; Newton Toolkit

University of Michigan, Ann Arbor MI

Software Designer, Office of Instructional Technology 1991 - 1993

- Worked with faculty and instructional designers to develop instructional multimedia, from paper prototypes to finished programs, performing formal usability testing
- Shot and edited video; taught classes; wrote articles
- Performed pre-release testing of Windows 3.0, Macintosh System 7.0, IBM OS/2, QuickTime, and other technologies
- Projects include a simulation of an audiometer, a videodisc-based program about side effects of antipsychotic medications, and the Velocity Manufacturing Corporation case study, which won a New Media INVISION silver medal in 1994
- Tools used: HyperCard; SuperCard; THINK C; THINK Class Library; ToolBook; Visual BASIC

EDUCATION

The College of Wooster, Wooster, OH

BA in English, Minor in Computer Science

- Developed a program teaching calculus limits and continuity in HyperCard and C for a math faculty member
- Campus jobs: writing tutor, student teaching assistant, computer science tutor, computer lab consultant
- Disc jockey and radio production manager, WCWS-FM
- Intern for Documentation, Academic Computing Services: developed software, newsletters, training courses, and a book documenting the campus computer network
- First prize, the Stephen R. Donaldson Prize for Fiction
- Graduated with honors

PUBLIC CONTENT

- Public code: <http://github.com/paulrpotts>
- Technical blogging: <http://praisecurseandrecurse.blogspot.com>
- Podcasts: <http://generalpurposepodcast.blogspot.com>
- Music: <http://commonlisp.bandcamp.com>
- Videos: <https://www.youtube.com/user/paulrpotts/videos>