

KEVIN DUBOIS

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(734) 883-1757

Experience

- **Zattoo, Inc**—Video and Operational Engineer
Ann Arbor, MI and Zürich, Switzerland: 2007-present
 - Slashed operational costs by 40% by consolidating data center presence in Zürich.
 - Single-handedly created the AAC audio decoder used in the company's flagship product, from scratch.
 - Researched and designed flexible video encoding system. The resiliency and flexibility of the system allowed the company great advantages in adapting to new challenges. Also consolidated greatly rackspace needed per encoder.
 - Tasks required attention to stability, uptime, hardware efficiency, cooperation with a large open source project, internal IT, and monitoring team.
 - Immersion into multimedia standards, such as DVB, MPEG, H.264, and AAC.
- **Google, Inc**—Student Summer of Code Developer for the FFMPEG project
Remote Development: 2009
 - Worked on advanced audio and video filtering architecture.
 - Required in-depth knowledge of audio principles, and advanced signal mathematics, open source development practices, and cooperation with remote developers.
- **Compiz Project**—Project Contributor
Remote Development: 2008-present
 - Contributed in the developed of advanced 3D window management system for X server based Linux systems.
 - Requires skill in video card drivers, OS level display servers (Xorg), window management, UI toolkits, and 3D technology, as well as strong abilities with matrices, physics, and geometry.
- **Speaking and Advocacy**—
 - kdubois.net: syndicated open source blog, with around 5000 pageviews per month. Syndicated on ubuntuweblogs.org, planet.compiz-fusion.org, and tuxmachines.com.
 - Speeches, e.g. Ann Arbor Computing Society, "Ubuntu as Your Main Desktop", January 2008.
 - Member of local Ubuntu advocacy group.

Education

- **University of Michigan**—Ann Arbor, MI
Computer Engineering, Electrical Engineering and Computer Science Department
 - Projected Graduation Date: May 2010
 - Courses include: Advanced Algorithms, Operating System Principles, CPU Architecture, Honors Mathematics, and Embedded Systems
- **University of Detroit Jesuit High School**—Detroit, MI
Graduated Top of Class

Skills

- **Computer Languages:**
 - Native Languages: C, C++, Verilog, Python, L^AT_EX, bash
 - Assembly Experience includes cross platform optimization of userspace code, as well as embedded programming of microcontrollers. Direct experience with PPC, Atmel, PIC, and i386.
 - Quickly adaptable to new languages and architectures.
- **Professional Development Practices:**
 - RCS: svn, git, mercurial, bzd
 - Build Systems: Makefiles, autotools, CMake
 - Miscellaneous: patching, merging, bug reporting systems, code reviews
- **Hardware Knowledge:**
 - Computer architecture design, including design of a out-of-order pipelined processor.
 - Feedback controlled, microcontroller-based embedded systems.
 - Familiarity with interrupts, stack-based embedded programming, analog concepts, and a wide variety of sensors.
- **Graphics Experience:**
 - OpenGL, 3D and Video Rendering, graphics drivers, compositing, alpha channels.
 - UI toolkit experience with GTK, Qt, WxWidgets in C, C++, and Python.
 - Xlib programming and window management.
- **Multimedia Knowledge:**
 - Extensive experience with most industry-standard audio and video codecs.
 - Physical Transmission standards, ATSC/DVB satellite/terrestrial/cable transmission.
 - Network Transmission, inc. RTP, MPEG TS, and Flash.
- **Networking Knowledge:**
 - Ability to complexly route traffic (iptables), setup subnets, etc.
 - socket programming, packet/encapsulation concepts, and network security.
 - Experience with datacenter networking, including fiber networking between data centers.
- **Operating Systems Experience**
 - Strong UNIX based systems experience, esp. Linux and BSD.
 - Kernel principles, page tables, process management, device drivers, distribution package management.

Organizational

- Vice President, Phi Delta Theta International, Michigan Chapter ($\Phi\Delta\Theta$)
- Children's Hospital Detroit Volunteer