

ZACHARY JAGGI

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Education: **University of Texas at Dallas, Richardson, TX** **August 2013 - Present**
Candidate for Bachelor of Science in Computer Science

Collin College, Plano, TX **August 2011 - May 2013**
Associates of Sciences

Employment: **Elk Products, Hickory, NC** (Software Engineering Intern) **May 2013 - Present**

- Rewrote several server softwares from the ground up to be streamlined, greatly reducing latency and significantly reducing memory and CPU footprint
- Corrected issues in UI of consumer remote control software, reducing problematic page loading time from seconds to milliseconds, as well as improving debug output

Skills: **Programming**

- Strong knowledge of **C/C++11, Python, C#, and Java**
- Experience in **Perl, JavaScript, PHP, Visual Basic, MySQL interfaces**, and **L^AT_EX**
- Experience developing with **Microsoft Visual Studio, Eclipse IDEs**
- Developed a custom **distributed server** for devices connecting via a custom protocol
- Designed an open-source **API** to abstract away a legacy protocol
- Wrapped the above API using **SWIG**, for use in Android, iOS, Windows
- Designed a **hardware-independent** embedded firmware in C++
- Use of **debugging utilities** (valgrind, GDB, GDB Embedded)
- Experience in **Android development**
- Experience in libraries including **SDL/2, POSIX, OpenAL Soft**
- Worked with **Git** and **SVN** source tracking

System Administration

- Administration of **Nginx, Apache** and other servers software
- Years of experience with various distributions of **Linux** (especially Arch Linux)
- Experienced in task automation via **Bash, Perl** and **Python** scripts

Embedded Systems

- Experienced in programming for **embedded systems**
- AVR/ARM Microcontrollers: **ATMega** and **ATTiny series**

Projects: **Virtual Reality**

- Development of interfaces for Virtual Reality technology (Vuzix VR920, Wii, Oculus Rift DK1/DK2)
- Managing the crossplatform work necessary to run Dolphin VR (Gamecube emulator) on Linux, and assisting with the new official support via OSVR

Open Source Community

- Ongoing packaging of software for the ArchLinux distribution, including VRUI development kit, Dolphin VR, oculus-wine-wrapper and others as well as contributed to the various articles of the ArchLinux Wiki
- Active Github user, with numerous contributions (often related to crossplatform work)

3D Printing

- Built and continually upgraded a MakerBot Cupcake, a hobbyist CNC 3D printer, including redesign of several individual parts using the OpenSCAD parametric 3D modeler
- Worked with the embedded C firmware code loaded onto the printer motherboard