

ZACHARY JAGGI

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<https://github.com/feilen>

- Education:** **University of Texas at Dallas, Richardson, TX** **August 2013 - May 2016**
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
 - Developed a custom distributed server for devices connecting via a custom protocol
 - Designed an open-source C++11 API and library to abstract away a legacy protocol
 - Wrapped the above API using SWIG, for automated use in Android, iOS, Windows
 - Designed a hardware-independent embedded firmware in C++11
- Skills:**
- Programming**
- Strong knowledge of **C++11, Python, C#, JavaScript** and **Java**
 - Experienced in **C99, Perl, PHP, Visual Basic**, and **NodeJS**
 - Experience developing with **Microsoft Visual Studio, Eclipse IDEs**
 - Use of **debugging utilities** (valgrind, GDB, GDB Embedded)
 - Experienced in **Android development**, and creating **cross-platform libraries** with **SWIG**
 - In-depth experience with **Git** and **SVN** version control systems
 - Experienced in several **machine learning** toolkits, especially python-nolearn and AML
 - Very experienced in creating **networked applications**, including **distributed servers** and clients
 - Some experience in writing **compilers and interpreters** for custom languages
 - Prior use of **profiling tools** to optimize hot-paths in expensive applications
 - Experience in **threaded applications** and resolving **parallelism issues**
 - Comfortable developing on/for **Windows, Linux, Android** and other platforms
- Embedded Systems**
- Experienced in programming **high-level, hardware independent code** for **embedded systems**
 - AVR/ARM Microcontrollers: **ATMega** and **ATTiny series**, and several **Freescale** processors
 - Resolving issues in provided μ OS to support **high level C++11 firmware**
- 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 development of VR software for Linux, including VRUI, OSVR, and numerous others
 - Active Github user, with numerous contributions (often related to ensuring applications work equally on Windows, Linux and OSX)
 - Resolving bugs tracked in GitHub's issue tracker, creating and merging pull requests, and resolving potential issues with PRs via realtime feedback
- 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