

# ZACHARY JAGGI

1700 Savage Drive, Plano, Texas 75023  
469-443-8325 // zxj110030@utdallas.edu

- Education:**      **University of Texas at Dallas, Richardson, TX**      **August 2013 - May 2016**  
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**
- Completely 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/C++11, Python, C#, and Java**
  - Experience in **Perl, JavaScript, PHP, Visual Basic, MySQL interfaces**, and **L<sup>A</sup>T<sub>E</sub>X**
  - Experience developing with **Microsoft Visual Studio, Eclipse IDEs**
  - Use of **debugging utilities** (valgrind, GDB, GDB Embedded)
  - Experience in **Android development**, and creating **cross-platform libraries** with **SWIG**
  - Experience in libraries including **SDL/2, POSIX, OpenAL Soft**
  - In-depth experience 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 **high-level code** for **embedded systems**
  - AVR/ARM Microcontrollers: **ATMega** and **ATTiny series**, and several **Freescale** processors
- 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