CHELSEA JAGGI

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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, expecially 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 µOS 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 neccesary 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