Andrew Volz

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Education

St. Olaf College

- *B.A. Computer Science* (Graduated May 2016)
- *Undergraduate Coursework:*
  - Computational Thinking in R and Python
  - Algorithm Analysis and Data Structures
  - Software Design and Implementation
  - Programming Languages
  - Independent Research in Software Dev
  - Ethical Issues in Software Design
  - Mobile Web Graphics/Computing Apps
  - Capstone: Tiled-Display Rendering

Employment

Lexmark ***Software/Firmware Engineer*** ***June 2016 – Present***

System BIOS Team

- The System Bios team is responsible for maintaining system startup after early boot, flashing/ updating embedded storage, managing system time and Real Time Clock driver, handling and reporting of application errors, collecting and storing system debug logs, and solving challenging system issues. Responsible for flashing, debugging, initialization (systemd), triage, and yocto.

Lexmark ***Software Engineering Intern*** ***May 2014 – September 2015***

Mechanical Engineering Services Team

- Developed Web-based applications using sophisticated data mining/information visualization solutions. Updated and modified Web based data reporting and recording systems, utilized large datasets produced by toner manufacturing equipment to construct internal web applications, and provided insight into the efficiency of milled-toner and photoconductive drum manufacturing processes.

Projects

Tiled-Based Display Rendering

- Successfully designed a coherent display to model large data on many screens.
- Defined a format for uniformly configuring computers to communicate and share data.
- Found the limitations of the network, software and hardware used.

Picasso — Steganographic Text/Image Encryption

- Designed a software utility that can translate Portable Pixmap Format (PPM) files to Scheme.
- Developed a method for encoding ASCII values into RGB values of image pixels.
- Built an Abstract Syntax Tree (AST) to represent a parsed image file in a meaningful way.
- Translated the AST into valid Scheme language code to execute the decoded program.

Other Projects:

- **KSTO Radio:** iOS App which provides streaming radio. Available on the App Store.
- **All About Olaf:** iOS App with resources for college students. Available on the App Store.
- Übersicht widget which displays the daily menu for restaurants using Bon Appétit Management Company's online menu service with filters for dietary preferences.
- Program that reads a 16-bit input value and prints that value's 21-bit Hamming code.
- Assembly program that translates character codes from I/O.
- Software simulation of the 1-bit ALU circuit.

Langauges & Technologies: C, C++, Java, Python, Objective-C, CakePHP, HTML, JavaScript, SQL, R

Philanthropy

Habitat for Humanity (April 2008)
Casas Por Cristo (November 2006, July 2007)
Praying Pelican Missions (June 2011)
Christ the Servant Missions (July 2008 and 2009)
Boulder Homeless Shelter (2004 – 2010)