Andrew Volz

www.drewvolz.com

Telephone: (720) 507-6582 Email: drewvolz@icloud.com

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***

Manufacturing Automation Software Engineering Team

- The Manufacturing Automation Software Engineering team is implementing a web-based status screen system to run the manufacturing facility using the Meteor framework, Mongo collections, and React. Responsibilities include helping design, document, and implement a robust API between the web server and the manufacturing servers.

Mobile Applications Team

- The Mobile Apps team is responsible for developing and supporting the Lexmark Mobile Print applications for iOS and Android. Responsible for work involving cross-platform application research and implementation, improvements with out-of-box printer configuration from mobile.

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:

- **All About Olaf:** iOS/Android app with resources for college students.
- **KSTO Radio:** iOS App which provides streaming radio. Available on the App Store.
- **Lexington Traffic Cams:** iOS/Android app to view streaming traffic cameras of Lexington
- 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, PHP, HTML, JavaScript, SQL, R

Philanthropy

Community Health Initative (January 2017)
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)