Drew 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

thoughtbot **Software Developer** **October 2018 – Present**

React Native development for iOS and Android mobile applications.

Lexmark **Software Engineer II** **June 2016 – August 2018**

Technical Rotation Program which consists of three, eight-month rotations. During my three rotations I've worked on firmware flashing, mobile applications, and manufacturing automation.

Manufacturing Automation Systems Engineering Team (November 2017 – Present)

As a member of the MASE team my responsibilities include:

- Developing web-based status screen system to run the manufacturing facility.
  - Web development in React, PHP, and SQL.
  - Implementing a websocket-based API between client and manufacturing servers.

Mobile Applications Team (February 2017 – October 2017)

As a member of the Mobile Apps team my responsibilities included:

- Developing the Lexmark Mobile Setup Assistant application.
  - iOS development in Objective-C.
  - Android development in Java.
- Implementation of wireless out-of-box printer configuration.

System BIOS Team (June 2016 – January 2017)

As a member of the System BIOS team my responsibilities included:

- Designing, implementing, and debugging firmware for laser printers.
- Implementing a command-line firmware flashing tool.
  - Firmware development in C and C++.
- Maintaining firmware flashing update GUI to Apple AirPrint spec.

Lexmark **Software Engineer, Intern** **May 2014 – September 2015**

Mechanical Engineering Services Team

As a member of the MES team my responsibilities included:

- Developing web applications for use in process manufacturing.
  - Web development in PHP, HTML, and SQL.
  - Producing real-time visualizations of large manufacturing datasets.
  - Providing custom tools to manage the manufacturing line.

Projects

All About Olaf and CARLS – Mobile Apps

- Unofficial mobile apps for St. Olaf and Carleton College.
- iOS and Android development in React Native.
- Testing, continuous integration with CircleCI and Travis.
- Open Source, published on Apple App Store and Google Play Store.

Tiled-Based Display Rendering

- Successfully designed a coherent display to model large data across many computers.
- Defined a format for uniformly configuring computers to communicate and share data.
- Calculated the limitations of 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 inside image pixels.

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

Volunteering

Haiti Health Initiative (January 2017 and 2018) **Praying Pelican Missions** (June 2011)