

# Andrew Woltman

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<https://github.com/woltmanandrew1/Projects>

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## Education

**Illinois Institute of Technology, Chicago, IL**

May 2020

B.S. Computer Engineering

B.S. Electrical Engineering

### Relevant Coursework:

- Data Structures
- Systems Programming
- Intro. to Computer Cyber Security
- Digital Computers & Computing Standards-Based Web Design
- Operating Systems
- Engineering Electronics
- Object-Oriented Programming I
- Interprofessional Project: Design for Technological Innovation
- Microcomputers/Embedded Comp.
- Discrete Structures
- Object-Oriented Programming II
- Computer Organization and Design

## Experience

**Electrical Engineering Intern**

May 2019 – August 2019

*Manitowoc Ice (Welbilt Corp.), Manitowoc, WI*

- Gained software experience while working on Android application for Ice machine control system.
  - Connected ice machine with Python using TCP/IP for Modbus protocol for data transfer to database.
  - Created HTML test files to test PHP scripts for user authentication and registration.
  - Coded in Java and PHP to create an Android application with login authentication.
- Assisted in qualifying a new manufacturing facility for 5% annually savings on touch screen displays.
  - Using Proface, Serial to Ethernet converter, and C, tested and debugged touch screen test fixture.
  - Used MPLAB X ide to verify data from resistive touch screen was packaged and sent to Serial to Ethernet converter.
  - Used Comptrol converter to verify data sent from touchscreen on serial ports was converted to Ethernet static ip local network.
  - Counted and displayed pass/fail touches with a Proface unit.
  - Accompanied Senior Reliability Engineer to run HALT testing at Elite Labs in Chicago

**Electrical Engineering Intern**

May 2018 – August 2018

*Manitowoc Ice (Welbilt Corp.), Manitowoc, WI*

- Used single photon time of flight sensor to create clear glass sensing solution for dispensing applications.
- Made changes to electrical sub-systems using the ECR/ECO process to reduce warranty claims.
- Implemented end of line test using single degree of freedom test sled to nominalize acceleration for warranty claims reduction at Mexican manufacturing facility.
- Wrote test code for cycle testing of vibration motors to perform reliability data analysis.

## Electrical Engineering Intern

May 2017 – August 2017

*Manitowoc Ice (Welbilt Corp.), Manitowoc, WI*

- Prepared and executed test plans to verify supplier specifications meet company requirements.
- Used 8D Root Cause Analysis for COPQ investigation on thermistors. Presented status on progress made to Senior VP of Engineering. Communicated with supplier executives about non-conforming products based on requirements.
  - Saved 10% on annual warranty spending with implemented fix.
- Facilitated on-site visits with suppliers to discuss progress on correcting failures to meet design specifications.
- Modeled circuits to validate new circuit configuration for accommodating water sanitation with UVC light.
- Executed integration and regression testing for control and display board software on ice machines.
- Redesigned 120 touch screen layouts to support Spanish and French languages using MS Visio.

## Software

### Software Development

- C
- SQL
- Java
- HTML
- MIPS
- Python
- ArcGIS
- GitHub
- Microsoft Visio
- Android Studio
- Visual Studio Code
- Cascading Style Sheets (CSS)

### Hardware/Test Development

- National Instruments – LabView
  - Sound and Vibration test suite
- Autodesk Inc. - AutoCAD and Inventor
- DesignSoft, Inc. - TINA Design Suite - Spice based circuit simulator and PCB design software
- Microchip Technology Inc. - MPLAB® Integrated Development Environment

## Campus Leadership and Involvement

**Member,** Illinois Tech Men's Tennis

March 2017-Present

- Student Assistant Coach (September 2019-Present)
- Captain (September 2017-May 2019)

**Member,** Illinois Tech Cyberhawks Club

September 2018-Present

- Treasurer (September 2018-May 2019)

**Member,** Illinois Tech Student Athletic Advisory Committee

September 2015-May 2019

- Internal Committee (September 2015-May 2019)
- Treasurer (May 2018-May 2019)

**Member,** Illinois Tech Men's Volleyball

August 2015-May 2017

**Member,** Green Bay Southwest Solar Olympics Team

September 2013-May 2014

- Silver medalist Photovoltaic, (PV) Innovation