## **Charles Wilkin**

### **EDUCATION**

## **Pennsylvania State University,** Middletown, Pa. — B.S. in Electrical Engineering

August 2018 - Current

Graduation in May of 2020.

## West Chester University, West Chester, Pa. — B.S. in Physics

August 2015 - May 2018

Degree requirements completed; diploma to be awarded upon completion of Electrical Engineering B.S.

### **EXPERIENCE**

# **Universal Machine & Engineering Corp.,** Pottstown, Pa. — *Electrical Engineering Intern*

Summer 2019

UMC designs and builds custom machinery for industrial automation.

- Created and edited the electrical schematics and control panel layouts for several large machines using AutoCAD 2020.
- Worked with coworkers to program an Epson 3-axis robot in SPEL+7.0.

### Vinegar Hill LLC, Chester Springs, Pa. — Co-founder

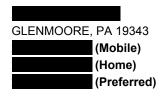
Jan 2018 - PRESENT

Vinegar Hill LLC is a small meadery consisting of five young students and professionals, founded to gain entrepreneurial experience.

 Significant experience brewing malt and brewed beverages in a sanitary environment, and navigating the state licensing process.

#### PROJECTS1

- The Inebriator An automated bartender.
- A self-stabilizing 250 class racing quadcopter.
- Several custom desktop PCs.
- JudgementBot A selfie-rating convolutional neural network.
- Gooba An asynchronous neural network with adaptive architecture.
- Busyboredom.com -- A portfolio website using rust and webassembly.<sup>2</sup>
- GetOffTheRoad -- A hackathon team project to keep drivers informed.
- A variable 5000 volt power supply for EAP actuators.\*



#### SOFTWARE

AutoCAD Inventor. (300+ hours)

AutoCAD 2020. (300+ hours)

• Matlab, Simulink. (300+ hours)

• Arduino. (200+ hours)

• Kicad, Qucs, Pspice, LTspice. (5+ small projects)

MySQL, MongoDB.

(5+ small projects)

Tensorflow.

(10+ small projects)

• C++, Rust, Python 3. (50+ small projects)

• Git Version Control.

(50+ small projects)

• Microsoft Office Suite. (7+ years)

• LaTeX. (20+ papers)

• Linux Command Line. (5+ years)

### **SKILLS**

- Speaking to both large and small audiences.
- PC building and maintenance.
- Soldering and breadboard prototyping.
- Business leadership and event planning.
- Self-education and problem solving.
- Safe conduct in physics and chemistry laboratories.

<sup>\*</sup>Work in progress

<sup>&</sup>lt;sup>1</sup> https://github.com/busyboredom

<sup>&</sup>lt;sup>2</sup> https://busyboredom.com