

# Charles Wilkin

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**Address:** [REDACTED]  
[REDACTED], PA, [REDACTED]  
USA

**Email:** Charlie@BusyBoredom.com  
**Website:** BusyBoredom.com  
**Github:** GitHub.com/busyboredom

EDUCATION	<b>Electrical Engineering B.S.</b> – <i>Pennsylvania State University</i>	May, 2020
	<b>Physics B.S.</b> – <i>West Chester University</i>	May, 2020
EXPERIENCE	<b>Electrical Controls Engineer</b> – <i>Universal Machine Company</i>	Jul, 2019 – Present
	UMC designs and builds custom machinery for industrial automation. <ul style="list-style-type: none"><li>• Programmed PLCs, HMIs, and robotic arms for custom machinery according to each client's unique requirements.</li><li>• Automated onboard logging and reporting, meeting strict regulatory requirements for completeness, security and reliability.</li></ul>	
	<b>Co-Founder</b> – <i>Vinegar Hill, LLC</i>	Jan, 2018 – Present
	Vinegar Hill LLC is a small meadery run by five young professionals, founded to gain entrepreneurial experience.	
PROJECTS	<b>SobreMesa SCADA</b> – A framework for web-based industrial control and data acquisition using only open-source tools.	Dec, 2020 – Present
	<b>AcceptXMR</b> – A multithreaded, asynchronous Monero payment gateway library.	Nov, 2021
	<b>Sunblock</b> – Shield your eyes from the sun with a motorized sun shade using Haar cascades and OpenCV.	Dec, 2020
	<b>Gooba</b> – An event-driven spiking neural simulator written in rust.	Dec, 2020
	<b>PocketLawyer</b> – A hackathon team project to automatically detect, record and transcribe abusive language (won 2 <sup>nd</sup> place).	Nov, 2020
	<b>GetOffTheRoad</b> – A hackathon team project to notify drivers of problematic weather conditions.	Nov, 2019
	<b>Amplifier Optimizer</b> – A genetic algorithm that does your circuit design homework.	Apr, 2019
	<b>The Inebriator</b> – An automated bartender.	Mar, 2019
	<b>JudgementBot</b> – A selfie-rating convolutional neural network.	Jan, 2019
	<b>Bro Server</b> – A collection of self-hosted projects including XMPP, Bitwarden and Git servers.	Jan, 2019
SKILLS	<b>Languages</b> – C++, Python, Rust, JavaScript, MATLAB, VBA.	
	<b>Databases</b> – MySQL, PostgreSQL, MSSQL.	
	<b>Backend</b> – Flask, Actix-Web.	
	<b>Frontend</b> – HTML5, CSS, Qt, WebAssembly.	
	<b>Libraries</b> – NumPy, SciPy, Pillow, OpenCV, libplctag, Serde, Matplotlib.	
	<b>Tools</b> – CMake, GCC, Git, Cargo, Tensorflow, Linux Command Line.	

*Programming Since 2011 (10 Years)*