Ben Lepsch

(434) 987 9468 | blepsch@gmail.com | github.com/benlepsch

Education

University of Virginia — Charlottesville, VA
Bachelor of Science in Computer Science Rodman Scholar — *Aug. 2020 – May 2024*

Experience

Controls Engineer — December 2024 – Present
Impact Automation — *Columbia, MD*
- Wrote Python scripts to generate XML files for repetitive Ladder Logic sequences
- Wrote Ladder Logic to control Allen-Bradley PLCs for automated sorting systems
- Assisted with mechanical setup, wiring, and debugging when installing new conveyor systems
- Designed and implemented changes to make system GUIs more modular using Python scripting
- Provided on-call tech support to assist Amazon technicians in debugging system errors during sorts

Rock Climbing Guide — May 2024 – September 2024
Atlantic Climbing School — *Bar Harbor, ME*
- Took clients rock climbing in and around Acadia National Park

Election Security Engineer — May 2023 – August 2023
Pittsylvania County Elections Department / UVA — *Chatham, VA*
- Assisted the Pittsylvania County Department of Elections with bringing their security standards up to the 2023 LESS

Undergraduate Research Assistant — May 2022 – August 2022
University of Virginia — *Charlottesville, VA*
- Modeled the spread and evolution of infectious diseases, focusing on COVID-19
- Explored data visualization via Hidden Markov Models and Phylogenetic trees, using Auspice and HMMer
- Used Rivanna (UVA Supercomputer) to schedule and execute programs on massive data sets

UVA Computing For Global Challenges Internship — May 2022 – August 2022
University of Virginia Biocomplexity Institute — *Charlottesville, VA*
- Modeled the spread and evolution of infectious diseases, focusing on COVID-19
- Explored data visualization via Hidden Markov Models and Phylogenetic trees, using Auspice and HMMer
- Used Rivanna (UVA Supercomputer) to schedule and execute programs on massive data sets

Research Assistant — May 2021 – August 2021
University of Virginia HPLP Lab — *Charlottesville, VA*
- Wrote and modified existing code to control multiple different RFID readers on a Raspberry Pi

Software & App Developer — February 2020 – May 2020
Grome — *Charlottesville, VA*
- Built an automated plant-watering system using C code to control an ESP8266 microcontroller that read soil moisture and temperature data, dispensed water based on a timer, and connected to a phone app to display data
- Project won the UVA Entrepreneurship Cup and $20,000
- Designed and built a phone app using Blynk to connect to the ESP8266, view data, and adjust watering parameters

Projects

bleps.ch | *Django, Cloudflare, Docker, Raspberry Pi/Ubuntu Server* — October 2024 – Present
- Developing a full-stack web app using Django, running on my Raspberry Pi
- Used a Cloudflare Zero Trust tunnel with Docker to account for my non-static IP

BenBot | *Python, Rust, Git, Docker, GitHub Actions* — May 2020 – Present
- Developed a discord bot using the Discord.py API wrapper, and working on porting it to Rust
- Automatically builds a package when pushed to GitHub using a Dockerfile and GitHub actions
- Currently, the bot saves messages to a separate channel in my discord server
- Previous iterations of BenBot let users play minesweeper, forward messages to their DMs, and unlock their apartment door without an ID card

Drawbot | *Python, GCODE, UI Design* — March 2022 – June 2022
- Collaborated with two UVA students to design and build a 3D-printer-esque machine to sign notecards
- Designed and built a desktop app written in Python to modify a GCODE file for the machine input
- Wrote code to control the motors for the machine, as well as the conveyor belt moving cards in and out

Technical Skills

Languages: Python, Rust, C/C++, Java, C#, SQL, JavaScript, PHP, HTML/CSS, Ladder Diagrams
Frameworks: Angular, Node.js, jQuery, Unity, Flask, Django, Bootstrap, LESS, JUnit, Ignition Designer
Developer Tools: Git, Docker, Heroku, Cloudflare, VS Code, Visual Studio, Selenium, Playwright, CAD, SolidWorks
Platforms: Linux (mainly Ubuntu & Raspbian), Windows, Arduino & ESP8266 Microcontrollers, Allen-Bradley PLCs
Miscellaneous: Microsoft Office Suite, Soldering, Rock Climbing, Conveyor belt tracking, Auto Repair, Guitar