Leo Berman

Computer Engineer

LinkedIn | 215-767-6705 | Personal Site | leograntberman@gmail.com | GitHub

Skills

- Python | C | C++ | Bash | Git | AWS | Docker | Rockwell PLC Programming | Assembly Language | Excel (VBA) | AutoCAD

Experience

Software Engineering Intern **EZSoft Inc.** *Malvern, PA, USA* **05/2024 - 08/2024**

- Performed R&D on Information and Control systems for leading factories in pharmaceuticals, food/beverage, and specialty chemical companies
- Programmed component-based software for PLCs (Programmable Logic Controller) using the ISA-88 and ISA-95 standards using a combination of scripting and ladder logic
- Developed Excel (VBA) for DDE (Dynamic Data Exchange) to copy 1000+ PLC5 tags into a newer ControlLogix system.
- Created a set of internal Python applications that were later added to the production codebase to execute mass code changes on text-based ladder logic programs to reduce errors for rote tasks and create in-program error checking. I was repeatedly able to modify these scripts on the fly to save 4+ hours of billable on-site hours for customers.
- Designed state of the art HMI (Human Machine Interface) and SCADA (Supervisory Control and Data Acquisition) systems to streamline and simplify factory processes
- Investigated time-sensitive system failures using a combination of remotely connecting to systems as well as high pressure on-site visits

Webscraping Researcher **Temple University** *Philadelphia, PA, USA* **03/2024 - Current**

- Developing reusable Python scripts for scraping 10+ years of Business Development Company's (BDC's) filings from the SEC's (U.S. Securities and Exchange Commission) website
- Creating a novel way of scraping tables to overcome inconsistent table formatting problems. Saving upwards of 6 hours per filing by leveraging actual element sizes being displayed in conjunction with the website's HTML
- Utilizing Python's Pandas, Beautiful Soup, Pyppeteer, Selenium, and Requests libraries to scrape over 30 Schedule of Investment (SOI) tables per company

Particle Physics Researcher **Temple University** *Philadelphia, PA, USA* **05/2023 - 08/2023**

- Developed Python scripts to script signal emulation for fast FPGA emulators designed to replicate photons shot through a cathode tube in order to compensate for deadtime
- Collaborated with physicists to reduce error rate to .042% for a portion of the MOLLER (Measurement Of Lepton Lepton Elastic Reaction) experiment
- Debugged WaveDump, an open-source data collection software written in C, to automate data entry from FPGA digitizers

General Engineering Intern **PennDOT** *King of Prussia, PA, USA* **05/2022 - 08/2022**

- Worked with an interdisciplinary engineering team to gather, process, and present data on the implementation of infrastructure projects
- Surveyed physical sites to assess MASH (Manual for Assessing Safety Hardware) compliance
- Documented checkpoints and data for efficient project tracking and management

Education

- **BS Electrical and Computer Engineering** **Temple University** *Philadelphia, PA, USA* **08/2021 - 12/2024**
- **AWS Cloud Practitioner** **Amazon** **Obtained 04/2024**
- **Technical Support Fundamentals** **Google** **Obtained 07/2021**

Projects

- Upcycling Treadmill to Web-Controlled Walk Pad (Writeup) - Created a web-controlled walk pad with an Arduino and a Raspberry Pi. Languages used include Arduino, Python, HTML, and JS
- Multivariate Gaussian Classifier (Writeup) - Implemented Bayesian decision making for a multivariate Gaussian classifier in Python. Utilized JMP and Scikit-learn to debug
- Tetris From Scratch - Built tetris in C++ without using tutorials or instructions. Did research on specific rotation patterns and frame rates

Mentorships

- **Science Fair Judge:** The Langley School | McLean Virginia
- **Mathematics/Physics Tutor:** Algebra | Calculus | Statistics | Elementary Classical Physics