Leo Berman

Computer Engineer

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

Skills

C/C++ | Assembly (AVR, MIPS, RISC-V) | Python | SQL | MongoDB | AWS | Git | Bash | Docker | Rockwell PLC Programming
FPGA (Xilinx) | MATLAB | AutoCAD | Jira | Excel (VBA)

Education

BS Electrical Computer Engineering (3.97 GPA) — **Temple University** — *Philadelphia, PA, USA* — **08/2021 - 12/2024**

- **AWS Cloud Practitioner** — **Amazon** — **Earned 04/2024**
- **Technical Support Fundamentals** — **Google** — **Earned 07/2021**

Experience

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

- Develop Excel (VBA) for DDE (Dynamic Data Exchange) to copy 1000+ PLC5 tags into a newer ControlLogix system.
- Create 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.
- Investigate time-sensitive system failures using a combination of remotely connecting to systems as well as high pressure on-site visits
- Participate in a week-long installation trip with a focus on client-facing soft skills while executing technical tasks.
- Design HMI (Human Machine Interface) and SCADA (Supervisory Control And Data Acquisition) systems to simplify industrial processes
- Perform R&D on Information and Control systems for leading factories in pharmaceuticals, food/beverage, and specialty chemical companies
- Program component-based software for PLCs (Programmable Logic Controller) using the ISA-88 and ISA-95 standards using a combination of scripting and ladder logic

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

- Developing Python scripts for scraping Business Development Company's (BDC's) filings from the SEC's (U.S. Securities and Exchange Commission) website
- Reduced average 20+ hour deliverable time by upwards of 400% by implementing novel scraping method utilizing viewports in conjunction with website HTML
- Utilizing Python's Pandas, Beautiful Soup, Pyppeteer, Selenium, and Requests libraries to scrape over 30 Schedule of Investment (SOI) tables per company
- Helping to manage RA teams to follow PEP8 standards to allow for effective peer programming

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

- Develop Python scripts to script signal emulation for fast FPGA emulators designed to replicate photons shot through a cathode tube to compensate for deadtime
- Collaborate with physicists to reduce error rate to 0.042 % for a portion of the MOLLER (Measurement Of Lepton Lepton Elastic Reaction) experiment
- Debug WaveDump, an open-source data collection software written in C, to automate data entry from FPGA digitizers directly to external disks

Projects

- Breast Cancer Digital Pathology System - Worked with machine learning specialists and other programmers to design and implement novel Machine Learning systems using 3.5 Terabytes of image data. Followed PEP8 standards as well as ISIP standards
- Upcycling Treadmill to Web-Controlled Walk Pad (Writeup) – Converted an out of commission full-size treadmill to a low profile walk pad controlled by a web interface via a Raspberry Pi talking with an Arduino. Languages used include Arduino, Python, HTML, and JS

Mentorships

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