ALEXANDER HOLME

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EDUCATION

Lafayette College | Easton, PA 2020
Bachelor of Science, Mechanical Engineering, Economics Minor (Finance Certificate) **GPA: 3.52**
Courses Included: Data Acquisition and Analysis, Differential Equations, Systems Engineering

TECHNOLOGY SKILLS AND CERTIFICATES

- **Data Science and Engineering:** Python (Pandas, Numpy, SciPy, Matplotlib, Seaborn), SQL (MySQL, phpMyAdmin, COMOS), SciKitLearn, PyTorch, MATLAB
- **Systems Engineering:** Siemens (Step7, PCS 7, OpCenter Pharma Execution, Batch, RC), Rockwell (AB)
- **Certificates:** University of Michigan (Applied Data Science with Python including Visualization, Machine Learning, and NLP), IBM (Databases and SQL for Data Science with Python)

RELEVANT EXPERIENCE

Pharmaceutical Automation Engineer | Siemens USA May 2022 – Present

- Helped pioneer top-down recipe driven manufacturing processes to improve global operational and regulatory efficiency for pharmaceutical companies with annual revenue in excess of $10 billion
- Lead data migrations of over 1+ million objects, built databases using Siemens COMOS and MySQL, developed migration pipelines using Python Pandas and iDBA
- Programmed Sequential Functions and Batch Recipes to automate manufacturing requests from SAP
- Automated testing procedures using Python Pandas to reduce FDA validation processes by over 50%
- Lead daily meetings on $10+ million projects to ensure design and execution excellence
- Helped clients develop System and Design Specifications. Wrote test plans for Site Acceptance Testing

Junior Solutions Engineer: | Siemens USA Aug 2021 – May 2022

- Designed digitalization plant upgrades leveraging "Industry 4.0" manufacturing technology
- Performed on site computer system validations of control system network of 40+ computers and 6,000+ I/O, system utilized a client server architecture built in a Citrix Cloud Environment
- Maintained internal testing environment using VMWare ESXI
- Developed Bulk engineering techniques on the fly to rapidly address systemic plant issues
- Programmed operator HMI, continuously collected feedback from users to improve system
- Interfaced with clients daily to understand their technological and design needs

Engineering Training Program | Siemens USA June 2020 – Aug 2021

- Rapidly learned and applied advanced concepts in computer engineering, network infrastructure, processes automation, and manufacturing
- Wrote Sales proposals to target customers, created budgets and planned resource requirements
- Gave pre-sales presentation to prospective clients to demonstrate Siemens technology capabilities

Renewable Energy Research Assistant | Lafayette College Honors Thesis Summer 2019 – May 2020

- Conducted experimental investigation to optimize the heat transfer of solar thermal tanks
- Independently ran experiments, processed and analyzed 450,000+ data points daily in MATLAB
- Generated data visualization in MATLAB that was published in the International Conference on Energy Sustainability

ACTIVITIES AND HOBBIES

- KEEN (Kids Enjoy Exercise Now), marathons, cycling, rock climbing, skiing, swimming, reading sci-fi
- Studied abroad for a culturally and linguistically immersive semester in Madrid, Spain