Rex Stayer-Suprick

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Professional Experience

Rockwell Automation **Milwaukee, WI**

Software Engineer and Architect, Intern *Summer 2024*

- Develop a mobile application's front and back-end codebase from scratch with .NET, XAML, and C# to communicate with proprietary ethernet devices over industrial transport protocols.
- Leverage .NET resources and full-stack development to create modular and robust back-end solutions.
- Communicate with scrum and DevOps teams to produce software and manage requirements with Agile methods.
- Lead a pitch to product managers, resulting in a funded project to be showcased at Automation Fair 2024.

Rockwell Automation **Milwaukee, WI**

Firmware Engineer, Intern *Summer 2023*

- Design and construct a machine to automate integration testing of leading-edge motor protection equipment using Python, C, and Artificial Intelligence architectures.
- Collaborate with large scrum teams to solve hardware and software anomalies with sprint Agile workflows.
- Utilize Python to create and analyze firmware ensuring safety and responsiveness of new products.

Johnsonville Sausage **Sheboygan, WI**

Controls and Software Engineer, Intern *Summer 2021 - Summer 2022*

- Deploy software to provide added efficiency and safety to manufacturing facility and equipment.
- Combine SQL databases and machine data with automation using Python to optimize machine uptime.
- Centralize machine and assembly code with engineers across the organization for increased security.
- Integrate SAP with USDA API certifications processes and process order management, using C++ and Java.

Education

University of Notre Dame **Notre Dame, IN**

B.S, Computer Science *2021-Present*

- GPA: 3.83
- Study Abroad - College of St. Andrews in Scotland, Fall 2023
- Found, lead, and coordinate the layout and graphic design for campus art magazine - SPARE.

Academic Projects

HTTP Client and Server in C | *Course: Systems Programming*

- Implemented performant HTTP client and server in C.
- Leveraged concurrency and multithreading to handle batches of requests from numerous clients.

Pub-Sub Back-end in Python | *Course: Distributed Systems*

- Constructed a robust, tolerance message broker using custom publication subscribe architecture in Python.
- Utilized pub-sub principles to scale system to 10,000 messages/sec.

Machine Learning for Algorithm Selection | *Course: Artificial Intelligence*

- Created 4 machine learning models to solve the Algorithm Selection Problem using PyTorch and TensorFlow.
- Investigated and analyzed neural networks and their applications to machine learning.

Machine Learning for CycleGAN Image Mapping | *Course: Machine Learning*

- Design a Machine Learning model to map images from one domain to another in python.
- Understand CycleGAN and Adversarial Network architectures using Scikit Learn and PyTorch.

Django Web Application | *Course: Algorithms Design & Analysis*

- Lead a small group of students to develop a feature complete web application with Django frameworks.
- Leveraged Python, JavaScript, and HTML to construct appealing backend and frontend software solutions.

Additional

Hobbies: Develop video games in C# with my programming and graphic skills, with the goal of solo developing and releasing a game in the future. Work with local food bank for 5 years to relieve food insecurity in local area. Reading, Wake Boarding, Hiking, and spending time with my family and friends.