Jay Ermi

jayermi61@gmail.com - 518-649-5522
https://jayermi.com/index.html

Indiana University, *Bloomington, IN, United States* *May, 2023*
Bachelor of Science, Intelligent Systems Engineering - Computer Engineering/Cyber Physical Systems
Capstone Project: Exoskeletal Arm Brace (EMG controlled prosthetic arm brace, sponsored by VispalExo)

Technical Skills:
- Languages: C, C++, Python, Java, Verilog VHDL/SystemVerilog, Signal Processing (MATLAB), HTML, JS, CSS, SQL, Assembly (ARM)
- Platforms & Hardware: Linux, Microsoft, Mac OS, Pynq, RaspberryPi, Arduino, Bayes3 (FPGA), Virtual Machines, Containers, OpenCV, Docker, SwaggerHub, FLASK
- Machine Learning/Mathematical Modeling: K-means, Convolutional Neural Networks, Linear Regression, Agent Based Models, TensorFlow, Image Processing (scikit/scipy), Modeling and Simulation (C++), PhysiCell, Open Face, Reinforcement Learning, Supervised/Unsupervised Learning, Pandas/NUMpy, SK learn
- Robotics/Drones: servo-motors, linear actuators, PCB fabrication, soldering, Lidar, PIXracer(MAVlink), QGroundcontrol, OpenMV, pi-cam
- Miscellaneous: Git/Github, Cad/Solidworks, Adobe, MQTT, Power Apps, Blender, Excel, OBS

Professional Experience:

Research Assistant to Dr. Gregory Lewis, Socio-Neural Lab (Kinsey Institute) *August, 2022-May, 2023*
- Worked on projects funded by the Department of Defense, including Trusting AI and Autism Movement Study. In each of these respective studies, I used OpenCV, Python, programmed haptic machines, and visualized data collected from live subjects
- Collected data from subjects through BioPak (EMG, ECG) processed these signals, and collaborated with other researchers to validate results for IRB approval.
- Created training datasets for use with neural networks and linear regression models
- Using a lightweight machine-learning model, the ASD study aimed to measure the movements of individuals with Autism Spectrum Disorder. The objective is to release a web-based platform that could recommend further professional consultation.

Data Analytics Intern, Reckitt Benckiser/Mead Johnson, Evansville, IN *May, 2020-August, 2022*
- Worked with two Senior Data Analysts and their department chair to identify and find solutions to server query issues and results.
- Utilized product and employee databases, and gained extensive experience in SQL (server query language).
- Investigated queries for errors, identified and debugged the issues to manage complexity. Intensive data analysis in Excel.

Information Technology Intern, Sabic Innovative Plastics, Mt Vernon, IN *May, 2019-August, 2019*
- Acquired communication skills working with 1000+ employees.
- Provided employees with functioning LAN internet connection (offices/production floors).
- Set up over 600 SABIC employees with operational phones and phone lines.
- Tracked down site-wide internet issues and resolved them across 70+ buildings.
- Worked with SABIC's site-wide servers establishing and breaking connections.
- Gained insight into roles of information technology and computer science with a global multi-faceted manufacturing & technology industry leader.