

Adam M. Exley

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EDUCATION

The Ohio State University, Columbus, OH
B.S. Electrical Engineering
Engineering Honors Program

Overall GPA (4.00 Scale): 4.00
Expected Graduation: May 2024

PROFESSIONAL WORK EXPERIENCE

FirstEnergy, Akron, OH

IT/OT Field Area Network Intern (May - August 2021)

- Responsible for configuration management of ~2,000 cellular radios used for supervisory control and data acquisition (SCADA) use
- Developed a novel and flexible work management platform in MS SharePoint through use of MS Power Automate

Center for Design and Manufacturing Excellence, Columbus, OH

Artificially Intelligent Manufacturing Systems (AIMS) Lab

Student Research Assistant (February 2021 – Current)

- Worked on privately funded research in technology aimed at detecting cyberattacks on manufacturing systems
- Trained and developed algorithms utilizing machine learning and neural networks in Python

NOTABLE PROJECT EXPERIENCE

Robot Pose Estimation and Verification (February 2021 – Current)

- Created an algorithm capable of predicting the joint angles of a 6-axis robotic arm from an RGBD (depth) image obtained from an Intel Realsense camera.
- Developed an automated annotation system for training a Mask R-CNN instance-segmentation neural network based on robotic forward kinematics and 3D mesh rendering

Autonomous Robotic Endotracheal Intubation (November 2020 – May 2021)

- Trained a YOLOv3 object-detection algorithm to recognize key landmarks in the human airway
- Collected data from a mannequin using a Verathon Glidescope Bronchoscope

SKILLS

- **Technical Knowledge:** Applied Computer Vision, Machine Learning
- **Programming Skills:** Python, Tensorflow (basic Neural Networks and GPU Acceleration), C/C++, MATLAB, Microcontroller and PLC/PLD programming
- **Software:** UNIX and Command Line Interfaces, Anaconda, Excel, Multisim, Solidworks, Autodesk Inventor, MS Power Platform, MS Office Suite
- **General Skills:** Soldering, 3D printing, Oscilloscope Use, Digital Logic Design, Circuit Design, Technical Drawing

RELEVANT COURSEWORK

Technical Writing — Digital Logic — Analog Sys. & Circuits — Honors Physics I/II — Linear Algebra — Engineering Calculus — Calculus I — Fundamentals of Engineering for Honors I/II

HONORS AND ACTIVITIES

Member of OSU IEEE Undergrad. Branch — National Merit Finalist (2020) — National AP Scholar (2020) — AP Capstone Diploma (2020)