Adam M. Exley

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OBJECTIVE

Electrical/Computer Engineering internship applying skills in hardware design/analysis, programming, and interpersonal skills for Summer 2022.

EDUCATION

The Ohio State University, Columbus, OH — Overall GPA (4.00 Scale): 4.00
B.S. Electrical Engineering — Expected Graduation: May 2024
Engineering Honors Program

WORK EXPERIENCE

Center for Design and Manufacturing Excellence, Columbus, OH
Artificially Intelligent Manufacturing Systems (AIMS) Lab
Student Research Assistant *(February 2021 – Present)*

- Engaging in implementation-focused research using robotics and artificial intelligence
- Using ROS (Robot Operating System) to control industrial robots for data collection

FirstEnergy, Akron, OH
IT/OT Field Area Network Intern *(May – August 2021)*

- Managed and updated configurations of ~2,000 cellular radios used for supervisory control and data acquisition (SCADA) of electrical grid
- Developed a novel and dynamic work management platform in MS SharePoint using MS Power Automate

PROJECT EXPERIENCE

Robot Pose Estimation and Verification *(February – September 2021)*

- 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 3D camera
- Developed automated object annotation/labelling system for a Mask R-CNN instance-segmentation convolutional neural network based on robotic forward kinematics, 3D mesh rendering, and camera specifications

Autonomous Robotic Endotracheal Intubation *(November 2020 – May 2021)*

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

SKILLS

- **Technical Knowledge:** Applied Computer Vision, Machine Learning
- **Programming**: Python, TensorFlow (Python), C/C++, MATLAB, PLD/FPGA programming, HTML, CSS
- **Platforms**: Windows, Linux/Unix, CLI, Anaconda Environments, Raspberry Pi, Arduino/Microcontrollers
- **Software**: VS Code, Git, Excel, Multisim, Solidworks, Autodesk Inventor, Simulink, MS Power Platform, MS Office Suite
- **General**: Soldering, 3D Printing, Oscilloscope Use, Digital Logic Design, Circuit Design, Technical Drawing, Electronics Repair, CAD/CAM

RELEVANT COURSEWORK

Engineering 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 — Member of OSU Photography Enthusiast Society
National Merit Finalist — National AP Scholar— AP Capstone High School Diploma