Austin Lin

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Open to Relocation | Active US Secret Clearance

SUMMARY

Systems Engineer with experience in requirements verification, robotics, and statistical modeling and simulation using Python and MATLAB.

TECHNICAL SKILLS

Languages: Python, C++, Java

Tools: MATLAB/Simulink, ROS2/Gazebo, SciPy, ZeroMQ, TCP/IP, Siemens NX, Git

EXPERIENCE

General Dynamics Electric Boat

Systems Engineer, New London CT   Sept 2024 - Present

- Reviewed and signed on electrical power systems updates to meet Columbia-class Ship Specifications.
- Identified electrical quality issues resulting from procedural gaps, and then developed and led corrective actions.
- Coordinated with Design, Planning, Structural, and Waterfront/Trades to maintain configuration management and reduce potential rework, in support of ongoing construction acceleration efforts.
- Led training sessions to bring new engineers up to speed with using internal tools and ongoing long-term projects.

UMD Spaces Systems Lab

Undergrad Researcher, College Park, MD   May 2022 – Aug 2022

- Modeled spacecraft robotic arm kinematics with Python to test reachability of payloads for in-orbit servicing missions, with Benjamin Reed from Quantum Space and Dr. David Akin.
- Designed and fabricated a ¼-scale physical robotic arm prototype. Produced and executed test procedure to validate python model results for 24+ spacecraft configurations.
- Created visuals and presentation to communicate testing and modelling results to stakeholders.

L3Harris C5 Systems

Systems Engineering Intern, Camden, NJ   June 2023 – Aug 2023

- Executed System Operability Verification Tests for Marcom IVCS and Symphony communication systems to ensure quality of product for the U.S. Coast Guard FRC program.
- Worked with Linux-based communication hardware, network configuration, and serial/IP interfaces.
- Completed CompTIA Network+ and IBM DOORS training.

RELEVANT PROJECTS

CSMC477: *Robotics Perception and Planning*

- Trained a YOLOv8 computer vision model and used OpenCV identify robots and Legos and perform mapping and localization. Estimated the distance between the robot and known objects using the bounding box size, and Dijkstra's algorithm to find the shortest path between two points on a map.
- Implemented inter-robot communication using ZeroMQ and TCP/IP to coordinate collaborative Lego handoff between robots.

ENME392: *Statistical Methods for Products and Processes*

- Statistical modeling and data visualization in Python and Matlab, including Monte Carlo simulations, linear regression, ANOVA, and chi-squared test.

EDUCATION

University of Maryland, College Park, MD   Aug 2020 – Aug 2024

B.S. Mechanical Engineering, Minor in Robotics and Autonomous Systems

Scholars Public Leadership Program

Montgomery Blair High School, Silver Spring, MD   Aug 2016 – May 2020

Magnet Math, Science, and Computer Science Program