Makenzie Brian

makenzie.brian@gmail.com • Seattle, WA
makenziebrian.com • linkedin.com/in/makenziebrian

Work Experience

Robotics Deployment Engineer/Project Engineer, Amazon Robotics, Seattle, WA March 2021 – Present

- Reduced deployment timelines by up to 50% by implementing new end-to-end Standard Deployment Procedures (SDPs) through close collaboration across multiple teams
- Provided subject matter expertise and technical guidance across multiple organizations in Robotics Sortation Technology at all North American Fulfillment Sites
- Managed deployment of over 216 robot arms and 8550 Autonomous Mobile Robots (AMRs) across nine Fulfillment Sites
- Established a continuous improvement framework for deployed robotics technologies
- Solicited user feedback on an existing product to improve utilization, provide self-guided troubleshooting, and establish clear escalation paths for abnormal issues
- Provided expert technical input and user-focused recommendations on a new product revision
- Drove alignment between stakeholder groups during product evolution
- Proactively identified risks, documentation errors, and technical misses to quickly find creative solutions

Robotics and Machine Learning Engineer, Martin Defense Group, Arlington, VA September 2020 – November 2020

- Outlined strategy for creation of digital twin system for decision making in autonomous vehicles

Graduate Research Assistant, OSU Personal Robotics Group, Corvallis, OR January 2018 – June 2019

- Designed test fixtures for manufacturing robots for Precision Castparts Corp.
- Studied compliance differences when patients are instructed via a telepresence robot vs. a human in protective equipment
- Statistical analysis for robotic testing with human subjects
- Taught student labs and mentored students in one-on-one settings; covered material included Electrical Fundamentals, Arduino Programming, and Sensor Integration
- Provided guidance and support for 38 unique group projects for a class of 126 students

Robotics Engineering for Manufacturing Intern, ESCO Group LLC, Portland, OR June 2017 – September 2017

- Developed small parts inspection process to find shrinkage defects, parting line flashing, and incorrect riser height
- Established a set of work methodologies detailing the maintenance procedures, safety policy, normal operating protocols, and troubleshooting guide for the Fanuc robotic arm and surrounding cell
- Communicated with expert inspectors in order to improve parts inspection and adapt in accordance with robotic limitations such as those present in dexterity and sensing at the level a human inspector would be able to perform

Education: Oregon State University

MSc Robotics: 2018 – 2019	**Master's Thesis**: "Patient Compliance Effects on Simulated Ebola Medical Care Delivery with a Telepresence Robot" **Advisor**: William Smart
Honors B.S. Electrical Engineering 2014 – 2017 Magna Cum Laude	**Honor's Thesis**: "Design and Implementation of a Ride-On Car with Data Tracking for Use by Young Children with Developmental Differences" **Advisor**: William Smart

Skills

- Computer Programming: Robot Operating System (ROS), Python, C, C++
- Software: MS Project, Clarity PPM, Agile, Git, MATLAB
- Experience with Project Management, Technical Writing, Machine Learning, Linux

Publications & Achievements

Tektronix Commercialization Award, Senior Capstone, 2017
Grand Team Challenge for Student Scholars, Water Level Project, 2016

J. Dawes, M. Brian, H. Bialek, and M. L. Johnston, "Wireless smartphone control using electromyography and automated gesture recognition," vol. 2018. IEEE, Engineering in Medicine and Biology, 2018, pp. 5390–5393

B. Narin, M. Brian, and W. Smart, "A critical look at smart wheelchairs," *International Conference on Intelligent Robots and Systems (iROS)*, 2018