Makenzie Brian

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

Work Experience

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

- Designed, delivered, and executed on a framework for continuous improvements to deployed robotic technologies while aligning expectations between design, software and deployment teams
- Provided subject matter expertise and technical guidance across multiple organizations in Robotics Sortation Technology at all North American Fulfillment Sites
- Surveyed and compiled user feedback on an existing product to improve utilization, provide self-guided troubleshooting, and establish clear escalation paths for abnormal issues
- Reduced deployment timelines by up to 50% by implementing new end-to-end Standard Deployment Procedures (SDPs) through close collaboration across multiple teams
- Managed deployment of over 216 robot arms and 8550 Autonomous Mobile Robots (AMRs) across nine Fulfillment Sites
- Influenced user-focused recommendations on a new product revision by providing expert technical insights
- 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 and initial design for creation of a digital twin system for decision making in autonomous vehicles

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

- Designed, ran, and analyzed experiments investigating compliance differences between patients who were instructed via a telepresence robot vs. patients instructed by a human in protective equipment
- Developed code to scrape and compile results on the Robot Operating System (ROS) Wiki users for the Open Source Robotics Foundation during their Wiki overhaul project
- Taught student labs and mentored students in one-on-one settings; material covered included Electrical Fundamentals, Arduino Programming, and Sensor Integration

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

- Worked closely with expert part inspectors in order to improve robot utilization for part inspection tasks
- Established a standard set of work methodologies detailing the maintenance procedures, safety policy, normal operating protocols, and troubleshooting guide for the Fanuc robotic arm and surrounding cell

Undergraduate Research Assistant, OSU Personal Robotics Group, Corvallis, OR September 2016 – December 2017

- Designed, built, and programmed a data collection system in collaboration with the Go Baby Go Project to track the use of a modified commercial Ride-On Car for children with disabilities

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: Python, C++, C, Robot Operating System (ROS)
- Software: Git, MS Project, Clarity PPM, Agile

Publications

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