MARK JENNINGS

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Work Experience

Los Alamos National Laboratory

Post Master | 2021 – Present

- Programmed robotic manipulators to automate nuclear manufacturing processes
- Implemented custom end-effector and peripheral sensors in confined glovebox
- Helped write technical procedures, readiness documents, and maintenance plans

Nuclear and Applied Robotics Group

Graduate Research Assistant | 2019 – 2021

- Developed contact-based controller for novel collaborative manipulator
- Refactored custom robot codebase to leverage open-source libraries and increase modularity

Sandia National Laboratories

R&D Intern | Summer 2019

- Designed and qualified additively manufactured metal components (DMLS)
- Received 1st place intern presentation

Apptronik Systems

Mechanical Engineer Intern | Summer 2018

- Derived forward kinematic equations for 10DoF humanoid bipedal robot
- Updated actuator testbed product to achieve higher payloads with lower fabrication costs

ReNeu Robotics Lab

Undergraduate Research Assistant | 2016 – 2019

- Fabricated metal components with both manual and CNC machines
- 3D-printed custom hand and finger prosthetics

Skills

Mechanical:

- Design: CAD, FEA, DFMA
- Manual/CNC Machining
- Additive Manufacturing

Software:

- C, C++, Python
- MATLAB
- Robot Operating System (ROS)
- ABB RAPID, RobotStudio
- Microsoft Office Suite, LaTeX

Certificates:

- DOE Q Security Clearance
- ABB Accelerated Programming

Education

MS Mechanical Engineering

UT Austin | 2019 – 2021 | 3.96 GPA

- Thesis: *Manipulator Control in Collaborative Assembly*
- Teaching Assistant: Nuclear Environmental Protection

BS Mechanical Engineering

UT Austin | 2015 – 2019 | 3.84 GPA

Coursework topics:

- Autonomous Robotics
- Manipulator Algorithms
- Classical & Modern Control
- Robot Mechanism Design