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| Mark Jennings  *Applied Roboticist* |[*markjennings97@gmail.com*](mailto:markjennings97@gmail.com)|[*https://makr.org*](https://makr.org) | |
| Work Experience | Education |
| Los Alamos National Laboratory  *R&D Engineer* | *2021 – Present*   * Overhauled nuclear glovebox with the first autonomous robotic arm in US plutonium part production * Developed operating procedures, maintenance plans, control software, and tooling for robotic arm, hydraulic punch, and laser marking systems * Coordinated intern program and advised projects * DOE Q (Top Secret equivalent) security clearance   Nuclear and Applied Robotics Group at UT Austin  *Graduate Research Assistant* | *2019 – 2021*   * Developed software to augment assembly tasks with a collaborative robot, reducing reported worker physical effort by up to 57% * Refactored custom codebase to leverage open-source libraries for a robust robotic research platform   Sandia National Laboratory  *R&D Intern* | *Summer 2019*   * Designed additively manufactured metal components and developed corresponding qualification standards * Led 1st place intern team in design competition   Apptronik  *Mechanical Engineering Intern* | *Summer 2018*   * Derived forward kinematic equations for an advanced humanoid bipedal robot * Updated actuator testbed product to achieve higher payloads with lower fabrication costs * Modeled heat transfer in liquid-cooled actuators   ReNeu Robotics Lab at UT Austin  *Undergraduate Research Assistant* | *2016 – 2019*   * Fabricated metal components with both manual and CNC machines * 3D-printed custom hand and finger prosthetics | MS Mechanical Engineering  *UT Austin* | *2019 – 2021* | *3.96 GPA*   * Robotics graduate program * Thesis: *Manipulator Control in Collaborative Assembly*   BS Mechanical Engineering  *UT Austin* | *2015 – 2019* | *3.84 GPA* |
| Skills |
| Mechanical:   * CAD (SolidWorks & Creo), FEA * Manual/CNC Machining * Additive Manufacturing   Software:   * C++, Python, MATLAB * Robot Operating System (ROS) * Microsoft Office Suite, LaTeX |
| Outreach |
| Los Alamos FIRST Tech Challenge  *Mentor/Coach* | *2022 – 2024*   * Taught ~12 middle schoolers STEM, problem-solving, and teamwork * Inspired eligible students to continue with high school robotics   UT Robotics & Automation Society  *Mentor/Officer* | *2015 – 2019*   * Competed in 1st year robotics challenge and then mentored teams throughout undergrad * Headed committee that made eye-catching outreach robots |