|  |  |
| --- | --- |
| MARK JENNINGS | [markjennings97@gmail.](mailto:markjennings@utexas.edu)com  [www.makr.org](https://www.makr.org/) |

**Education – The University of Texas at Austin**

|  |  |
| --- | --- |
| **MS Mechanical Engineering**  Dynamic Systems and Control, 3.95 GPA | **2019 – May 2021** |
| **BS Mechanical Engineering**  Robotics Certificate Program, 3.84 GPA | **2015 – 2019** |

**Research Experience**

|  |  |
| --- | --- |
| **Nuclear & Applied Robotics Group**  *Graduate Research Assistant* | **2019 – May 2021** |

* Develop real-time controls for passively-balanced robotic arm
* Implement collaborative manufacturing and confined manipulation tasks

|  |  |
| --- | --- |
| **Rehabilitation and Neuromuscular (ReNeu) Robotics Lab**  *Undergraduate Research Assistant* | **2016 – 2019** |

* Designed and manufactured parts for rehabilitation robots
* 3D printed and assembled prosthetic hand and prosthetic finger

**Work Experience**

|  |  |
| --- | --- |
| **Sandia National Labs**  *R&D Intern* | **Summer 2019** |

* Proposed qualification procedure for additively manufactured metal parts
* Designed electronics housing and validated it through non-destructive CT and vibration techniques as well as mechanical stress/strain testing
* Awarded 1st place team in summer-long intern competition

|  |  |
| --- | --- |
| **Apptronik Systems**  *Engineering Intern* | **Summer 2018** |

* Designed and fabricated mechanical fixtures for lower-body powered exoskeleton
* Updated actuator testbed product to achieve higher loads with lower machining costs
* Developed forward kinematics for 10 DoF bipedal robot

**Leadership Experience**

|  |  |
| --- | --- |
| **Capstone Engineering Project**  *Engineering Lead* | **Spring 2019** |

* Collaborated with 3 other seniors to redesign a feedstock hopper for an SLS printer
* Delivered final prototype with significantly improved powder retention and distribution

|  |  |
| --- | --- |
| **UT Robotics & Automation Society (RAS)**  *Mentor, Officer* | **2015 – 2019** |

* Assisted in community outreach events to introduce youth to robotics
* Mentored 3 teams of 5-6 students in annual robotics competition throughout undergrad

**Technical Skills**

|  |  |  |
| --- | --- | --- |
|  | *Proficient* | *Familiar* |
| **Programming** | C++, Robot Operating System (ROS), Linux | Python, MoveIt |
| **Software** | SolidWorks, MATLAB, MS Office | PTC Creo, LabVIEW |
| **Algorithms** | Manipulator control, Obstacle avoidance, A\* | SLAM, Point set registration |
| **Fabrication** | Manual machining, Additive manufacturing | CNC operation |