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## EDUCATION

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|---------------------------------------------------------------------------------------------------------------------------------|-------------------------------|
| <b>Georgia Institute of Technology</b><br><i>M.S. Robotics concentration in AI, Computer Vision, Controls</i><br>GPA: 3.83/4.00 | Atlanta, GA<br>2021 - 2023    |
| <b>Tennessee Technological University</b><br><i>B.S. Mechanical Engineering concentration in Mechatronics</i><br>GPA: 3.95/4.00 | Cookeville, TN<br>2015 - 2019 |

## EXPERIENCE

|                                                                                                                                                                                                                                                                                                                                                                                         |                |
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| <b>Graduate Research Assistant - Healthcare Robotics Lab</b><br>• Applied machine learning to assistive household robotics<br>• Led projects, designed and trained models, implemented interpretability tools, collected and curated video datasets, designed data capture hardware and protocol<br>• Led a lab reading group focusing on transformers, RL, and current robotics papers | 2022 - Current |
| <b>Project Lead Robotics Engineer - E.G.O. Products</b><br>• Programmed AGV to store and deliver 500 spools to 4 lines with robust error handling<br>• Trained 30+ workers to interact with my custom user interface and the robot<br>• Manager of robotics line, added a buffer to the line which alleviated a large bottle neck                                                       | Summer 2022    |
| <b>Project Lead Engineer - Johnson Controls</b><br>• Designed and launched a new sprinkler with tamper resistant design for use in prisons<br>• Submitted two invention disclosures for sprinkler products I designed                                                                                                                                                                   | 2020 - 2021    |
| <b>Mechanical Engineer - Protomet Manufacturing</b><br>• Designed and manufactured a universal speaker mount that has been sold to companies and designed other products                                                                                                                                                                                                                | Summer 2018    |
| <b>Engineer - Oak Ridge National Laboratory</b><br>• Worked with Fire Modeling software (FDS) to discover the optimal building safety design                                                                                                                                                                                                                                            | Summer 2016    |

## PUBLICATIONS

|                                                                                                                                                                                                     |                       |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| <i>Collection of Data on AI Progress</i><br>• AI models history & costs, hardware, software, & benchmark progress, AI papers published, forecasting, etc.                                           | In Progress           |
| <i>Text Conditioned Robot Task Planner and Executor</i><br>• Given text such as "open drawer" the model visually plans and executes the task.                                                       | In Progress CoRL 2023 |
| <i>Visual Contact Pressure Estimation for Grippers in the Wild</i> - <a href="#">Link</a><br>• With an image as input, our model can estimate contact pressure and force/torques for robot grippers | 2023                  |

## PROJECTS

|                                                                                                                                                                                   |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| <b>Learning Robotic Tasks from Video Demonstration</b><br>• Designed a robotic system to learn control policies using only video data in a simulated robot env with a transformer | 2022 |
| <b>Combination and Benchmark of RL Models</b><br>• Created a custom RL agent and benchmarked the top RL algorithms using OpenAI Gym                                               | 2022 |
| <b>NLP Sentiment Analysis</b><br>• Created and trained an NLP model, used on a custom test set of tweets & reddit posts to evaluate sentiment on a topic                          | 2022 |

## SKILLS

**Programming:** Python, C++, MATLAB, Computer Vision, Machine Learning, Git || **Design:** Solidworks, CAD, Creo  
**Machining:** Mills, Lathes, CNC Machines || **Other:** FEA, ROS, LabVIEW Linux, ANSYS