SRIDHAR THIAGARAJAN

www.linkedin.com/in/sridhartee — https://sritee.github.io/
www.github.com/sritee ◇ thiagars@oregonstate.edu , +1-541-908-3285

SUMMARY

Robotics graduate student with 3+ years experience designing and testing AI for real-time robotics applications. Strong mathematical background in machine learning, reinforcement learning and controls.

EDUCATION

M.S in Robotics, Oregon State University - GPA (4.0/4.0) *Sept 2018-20*
Sequential Decision Making, Large Scale Convex Optimization, Probabilistic Graphical Models etc.

Bachelor of Engineering, Anna University CGPA- (8.31/10) *May 2018*

TECHNICAL SKILLS

- Programming: Python, C++, MATLAB
- Solvers/Libraries/Software: TensorFlow, ROS, OpenCV, Gazebo, CVX, Git,
- Self Study: Bishop's Pattern Recognition and Machine Learning, Convex Optimization by Stephen Boyd, Richard Sutton's Introduction to RL, Stephen Abbott's Understanding Real Analysis

EXPERIENCE

Personal Robotics Lab, Oregon State University Oct 2018-Ongoing
Graduate Researcher

· Researching dimensionality-reduced RL for faster convergence in high-dimensional state spaces.
· Developed finite horizon action planners for Ebola camps in Africa organized by *Doctors without Borders.* Formulated it as an integer optimization problem, and solved a sequence of relaxed LPs.

IIIT Delhi, India May 2017 - Oct 2017
Machine Learning and Robotics Intern *[Poster]*

· Designed one-shot imitation learning algorithms in TensorFlow for egocentric manipulation.
· Designed and evaluated Reinforcement Learning based adaptive traffic light controllers, and found them to be an improvement of over 21 percent when compared to a non-intelligent controller.

Swaayatt Robots, India Dec 2016 - Feb 2017
Reinforcement Learning and Robotics Intern

· Designed and tested off-policy, model-free reinforcement learning methods for steering control of an autonomous vehicle. Trajectories to be followed were detected with a CNN trained to 97% test error.
· Designed several mechanisms for vehicle's drive by wire conversion, and used ROS to integrate all sensor information for the reinforcement learning workflow.

ACADEMIC PROJECTS (SELECTED)

- Autonomous Beach Cleaning Robot [Video]
  - Led team of 3 which developed a novel Autonomous Beach Cleaning robot using ML.
- Autonomous Driving Overtaking using Temporal Abstractions in RL [Report]
  - Implemented and tested several research papers in options framework, a temporal abstractions framework and designed a simulator to test my proposed framework for autonomous driving.