

# NITIN KASSHYAP RAGOTHAMAN

reallynitin@gmail.com

linkedin.com/in/nitinkasshyap/

rnitin.github.io

## EDUCATION

<b>Texas A&amp;M University</b> , College Station, TX	Expected May 2023
Master of Science in Computer Engineering	GPA: 3.8 / 4
<b>National Institute of Technology</b> , Tiruchirappalli, India	Nov 2020
Bachelor of Technology in Electrical and Electronics Engineering	CGPA: 8.96 / 10

## EXPERIENCE

<b>Texas A&amp;M University</b> , College Station, TX	Feb 2022 - Present
<i>Graduate Researcher</i>	<i>Python, PyTorch, ROS</i>
<ul style="list-style-type: none"><li>Developing offline reinforcement learning (RL) algorithms for federated agents and robots.</li><li>Improved the navigation of a wheeled robot on unknown surface conditions using model-agnostic meta learning.</li></ul>	
<b>Texas A&amp;M University</b> , College Station, TX	Sep 2021 – Present
<i>Graduate Assistant Teaching</i>	<i>ARM Assembly</i>
<ul style="list-style-type: none"><li>Conducted lab sessions for the Microcontroller Architecture course with ARM assembly language and MSP432.</li></ul>	
<b>ETH Zürich</b> , Zürich, Switzerland	Jul 2022
<i>Robotics Summer School</i>	<i>C++, Python, ROS, PyTorch</i>
<ul style="list-style-type: none"><li>Created C++ programs for the integration of sensor fusion, perception and mapping in an autonomous ground vehicle.</li><li>Built a pipeline using ROS to cluster and localize images from 3D point clouds following object detection.</li></ul>	
<b>Jio Platforms Limited</b> , India	Sep 2020 – Jun 2021
<i>Graduate Engineer Trainee</i>	<i>Python, PyTorch, Scikit-learn, PySpark</i>
<ul style="list-style-type: none"><li>Implemented a robust text-independent speaker recognition system employing the SincNet architecture.</li><li>Trained deep neural networks to create noise-resilient end-to-end neural embeddings.</li></ul>	
<b>Dalhousie University</b> , NS, Canada	May 2019 – Jul 2019
<i>Research Intern, Mitacs Globalink Program</i>	<i>C++, ROS, Gazebo</i>
<ul style="list-style-type: none"><li>Designed a distributed controller for the rendezvous of mobile robots, work presented at <a href="#">IEEE ROBOT 2019</a>.</li><li>Implemented collision and obstacle avoidance using potential field and fuzzy logic control.</li></ul>	
<b>Indian Institute of Technology Madras</b> , India	May 2018 – Jul 2018
<i>Research Intern</i>	<i>C++, MATLAB</i>
<ul style="list-style-type: none"><li>Built a novel haptic feedback system for enhanced human-robot interaction in the tele-operation of a quadrotor.</li></ul>	

## SELECTED PROJECTS

<b>Robot Grasping</b> , Texas A&M University	Apr 2022
<ul style="list-style-type: none"><li>Designed an RL policy for end-to-end grasping of rigid objects by a 6-DoF manipulator from point clouds.</li><li>Simulated the manipulator with V-REP/CoppeliaSim and implemented motion planning using the MoveIt library.</li></ul>	
<b>Eye Gaze Detection</b> , Texas A&M University	Dec 2021
<ul style="list-style-type: none"><li>Created a 3D eye gaze estimation model and trained a LeNet CNN for its implementation with PyTorch &amp; OpenCV.</li><li>Achieved an improved performance of 2.89° mean error utilizing head pose-independent gaze estimation.</li></ul>	

## SKILLS

<i>Programming Languages:</i>	C/C++, Python, SQL, MATLAB, Bash
<i>Libraries and Frameworks:</i>	ROS, PyTorch, Scikit-learn, OpenCV, Git
<i>Tools and Simulation:</i>	Unity, Gazebo, OpenAI Gym, MuJoCo, Simulink, TINA/SPICE

## ACTIVITIES

<b>Talking Robotics</b>	Oct 2022 – Present
Co-organizing bi-weekly <a href="#">virtual seminars</a> focusing on robotics and allied fields such as AI and HRI.	
<b>Illuminate Trichy</b>	Jul 2019 – Mar 2020
Volunteer teacher at an NGO aimed towards helping middle-school students learn science, math, and English.	