SIDHARTH TALIA

·LinkedIn

EDUCATION

University of Washington Seattle	2022 - 2027
– Paul G. Allen School of Computer Science	*WA, USA*
Ph.D. in Computer and Information Science	Cumulative GPA: 3.89
Guru Gobind Singh Indraprastha University Delhi	2016 - 2020
— Bharati Vidyapeeth College of Engineering Delhi	*Delhi, IND*
Bachelor of Technology in Electrical and Electronics Engineering	Cumulative GPA: 8.81/10.0

EXPERIENCE

University of Washington, Seattle	Sep 2022 - Present
Graduate RA/TA, Advisor: Dr. Siddhartha S. Srinivasa	*Seattle, WA, USA*

- RA, focusing on field robotics. Part of the RACER team
- TA for CSE478: Autonomous robotics

Indian Institute of Technology(I.I.T.)-Delhi	Jan 2022 - June 2022
DLive project assistant, Advisor: Dr. Sunil Jha	*Delhi, IND*

- Created a system for improving lane center estimation on adverse Indian road conditions that could also be used for automatic generation of lane marker labels.

University of Washington, Seattle	April 2020 - 2022
PRL remote intern, Advisor: Dr. Siddhartha S. Srinivasa	*Seattle(Remote), WA, US*

- Project lead for PuSHR (IROS 2023): A multi-robot system for non-prehensile rearrangement
- Improving lane tracking of an imitation learning agent by predicting trajectories instead of single timestep actions

Consultant/Freelance software engineer	October 2020 - December 2021
Self-employed	*Delhi, IND*

- Providing consultancy/software engineering services to start-ups in the automation sector

Indian Institute of Technology(I.I.T.)-Delhi	June 2019 - July 2020
DLive project intern, Advisor: Dr.Sunil Jha	*Delhi, IND*

- State estimation lead for GPS-INS Odometry, deployed on a full-scale vehicle

Botlab Dynamics	February 2019 - April 2019
RnD intern	*Delhi, IND*

- Created and deployed a visual odometry system for high altitude navigation with quadcopters with $< 3\%$ drift over dessert-like terrain

Indian Institute of Technology(I.I.T.)-Delhi	June 2018 - August 2018
Celestini program India 2018 project intern, Advisor: Dr.Aakanksha Chowdhery	*Delhi, IND*

- Advanced Driver Assistance System (ADAS) coupled with V2V communication

Omnipresent RobotTech	June 2016 - October 2017
Intern	*Delhi, IND*

- Created a quadcopter flight controller to learn about control systems, state estimation, hardware design, and basics of computer vision

PUBLICATIONS

- Sidharth Talia, Matt Schmittle, Alexander Lambert, Alexander Spitzer, Christoforos Mavrogiannis, Siddhartha S. Srinivasa. "Demonstrating HOUND: A Low-cost Research Platform for High-speed Off-road Underactuated Nonholonomic Driving". Robotics: Science and Systems 2024. Paper, Website)

- Sidharth Talia*, Arnav Thareja*, Christoforos Mavrogiannis, Matt Schmittle, and Siddhartha S. Srinivasa. "PuSHR: A Multirobot System for Nonprehensile Rearrangement." (IROS 2023, Paper, Github)

- Sidharth Talia, "A multimodal approach for localization of Ackerman steering micro ground vehicles in bad GPS reception environments." In 2019 3rd International Conference on Recent Developments in Control, Automation & Power Engineering (RDCAPE), pp. 64-69. IEEE, 2019. (Paper, Github)

PROJECTS

- Low-cost research platform for researching aggressive offroad autonomy (HOUND)
- Multi-robot non-prehensile rearrangement system (PuSHR)
- Integration of MuSHR into a Unity-based simulator for reinforcement learning link
- Leveraging Bezier curves for deep learning based autonomous navigation link
- Low-cost inertial navigation system link.

SKILLSET

- Languages: Python, C++
- Frameworks: Pytorch, OpenCV, PyCUDA, ROS.
- Embedded systems: Familiar with Ardupilot and Px4 frameworks.
- CAD: Autodesk Fusion 360.