

EDUCATION	International Institute of Information Technology, Hyderabad	2018 - 2021
	M.S. by Research in Computer Science & Engineering Advisor: Prof. K. Madhava Krishna GPA: 9.50/10	
	Anna University, SSN College of Engineering, Chennai	2013 - 2017
	B.Eng. in Electronics & Communication Engineering GPA: 7.2/10	
PUBLICATIONS	RP-VIO: Robust Plane-based Visual-Inertial Odometry for Dynamic Environments 📄	
	Karnik Ram, Chaitanya Kharyal, Sudarshan S. Harithas, K. Madhava Krishna <i>International Conference on Intelligent Robots and Systems (IROS), 2021</i>	
	Learnable Spatio-Temporal Map Embeddings for Deep Inertial Localization	
	Dennis Melamed, Karnik Ram, Vivek Roy, Kris Kitani <i>International Conference on Intelligent Robots and Systems (IROS), 2022</i>	
	CalibNet: Geometrically-Supervised LiDAR-Camera Extrinsic Calibration using 3D Spatial Transformer Networks 📄	
	Ganesh Iyer, Karnik Ram, J. Krishna Murthy, K. Madhava Krishna <i>International Conference on Intelligent Robots and Systems (IROS), 2018</i>	
	INFER: Intermediate Representations for Future Prediction 📄	
	Shashank Srikanth, Junaaid Ahmed Ansari, Karnik Ram, Sarthak Sharma, J. Krishna Murthy, K. Madhava Krishna <i>International Conference on Intelligent Robots and Systems (IROS), 2019</i>	
	PathFinder: Designing a Map-less Navigation Robot for Blind People in Unfamiliar Buildings	
	Masaki Kuribayashi, Tatsuya Ishihara, Daisuke Sato, Jayakorn Vongkulbhisal, Karnik Ram, Seita Kayukawa, Hironobu Takagi, Shigeo Morishima, Chieko Asakawa <i>CHI Conference on Human Factors in Computing Systems, 2023 (Under review)</i>	
WORK	Carnegie Mellon University	Oct 2022 - Present
EXPERIENCE	<i>Research Associate, Robotics Institute</i> Working on active robot perception using a novel controllable depth sensor. Advisor: Prof. Srinivasa Narasimhan	
	Carnegie Mellon University	Aug 2021 - Oct 2022
	<i>Research Associate, Robotics Institute</i> Worked on deep inertial-only localization algorithms for indoor navigation, and assistive technologies for the visually impaired. Advisor: Prof. Kris Kitani	
	International Institute of Information Technology, Hyderabad	Aug 2018 - Aug 2021
	<i>Graduate Research Student, Robotics Research Center</i> Worked on monocular visual-inertial odometry for dynamic environments, and trajectory prediction. Advisor: Prof. K. Madhava Krishna	
	Google Summer of Code	Summer 2018
	<i>Student Developer, Mobile Robot Programming Toolkit</i> Developed a GUI app for the extrinsic calibration of depth sensors.	

International Institute of Information Technology, Hyderabad

Research Intern, Robotics Research Center

May 2017 - April 2018

Worked on target-less LiDAR-camera extrinsic calibration algorithms.

Advisor: Prof. K. Madhava Krishna, J. Krishna Murthy.

RELEVANT COURSEWORK	<i>Graduate:</i> Mobile Robotics, Computer Vision, Machine Learning, Topics in Applied Optimization. <i>Undergraduate:</i> Robotics & Automation, Digital Image Processing, OOP & Data Structures, Computer Architecture, Probability & Random Processes, Embedded & Real Time Systems
ADDITIONAL COURSES	ETH Robotics Summer School , ETH Zürich ☞ July 2019 2-week summer school on autonomous ground robot navigation. Committee: Cesar Cadena, Marco Hutter
TEACHING EXPERIENCE	CSE 483 Mobile Robotics ☞ Fall 2019 <i>International Institute of Information Technology, Hyderabad</i> Head teaching assistant with Prof. K. Madhava Krishna 3D Computer Vision Workshop Feb 2020 <i>International Institute of Information Technology, Hyderabad</i> Instructor for tutorial session on multiple view geometry
AWARDS	<ul style="list-style-type: none">• Top 2 out of 134 teams in the ARTPARK Robotics Challenge, IISc 2021• Best Senior Year Project, ECE Department, SSN-CE 2017• First place, inter-college image processing based robotics event, Anna University 2016• Top 10 out of 144 teams in the “Apps for Chennai Challenge” 2015
SERVICES	<ul style="list-style-type: none">• Lab Systems Administrator for the compute cluster at RRC, IIIT Hyderabad. 2020-21• Served as a reviewer in the SLAM track for IROS. 2021, 22• Served as a co-chair for the VI-SLAM session at IROS. 2021• Conceived, developed, and maintained The SSN App, the official Android app of SSN-CE. 2014-17
TECHNICAL SKILLS	<i>Tools & Libraries:</i> OpenCV, ROS, PyTorch, Ceres Solver, Eigen, Git Familiar: iOS, Qt, Android <i>Programming Languages:</i> C++, Python Familiar: Swift, Java