

# Karnik Ram R.

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INTERESTS	Computer Vision, Mobile Robotics, Aerial Robotics	
EDUCATION	<b>Sri Sivasubramaniya Nadar College of Engineering, Chennai (SSN)</b>	2013 - 2017
	B.Eng. in Electronics & Communication Engineering (ECE) from <b>Anna University</b> , Chennai Cumulative Grade Point Average: 7.20	
	<b>Vidya Mandir Senior Secondary School, Chennai</b>	2011 - 2013
	Senior Secondary Education, Central Board of Secondary Education Science Stream with Computer Science, Aggregate: 94.4%	
RESEARCH	<b>International Institute of Information Technology, Hyderabad</b>	May 2017 - Present
	Advised by: Dr. K. Madhava Krishna in the Robotics Research Center Project: Markerless LiDAR-Camera Extrinsic Calibration for an Autonomous Car	
INTERNSHIPS	<b>Navstik Autonomous Systems, Pune</b>	Summer 2016
	Computer Vision Intern Developed and evaluated GPU-accelerated person tracking applications for a drone.	
	<b>Health Care Technology Innovation Centre, IIT Madras</b>	October 2016
	Computer Vision Intern Developed a motion capture application for body posture tracking using IMUs and a Kinect.	
SELECTED PROJECTS	<b>Dense Visual Odometry with an RGB-D Camera</b>	Fall 2017
	Implemented a pipeline to estimate camera motion through photometric error minimization.	
	<b>Automated Stock Counting Using a Quadcopter</b>	Spring 2017
	Developed optic flow odometry and stock counting modules for a warehouse quadcopter.	
	<b>Low-Cost Flight Controller for a Quadcopter</b>	Fall 2015
	Developed an 8-bit flight controller for a quadcopter using an ATmega328 and a 3-axis gyro.	
	<b>Other Projects</b>	
	<ul style="list-style-type: none"><li>• Motion-Based Camera-IMU Calibration</li><li>• Visual Servoing of a Mobile Robot</li><li>• Seglio - a marketplace for used textbooks (Android)</li></ul>	
STUDENT ACTIVITIES	<ul style="list-style-type: none"><li>• Conceived, developed, and maintained <b>The SSN App</b> - the official mobile app of SSN.</li></ul>	2014 - 2017
	<ul style="list-style-type: none"><li>• <b>Event Coordinator</b>, SSN-ECE Tech Club</li></ul>	2016 - 2017
	<ul style="list-style-type: none"><li>• Taught basic concepts in robotics and computer vision to sophomores and juniors over a semester.</li><li>• Organized an Internet of Things themed inter-college hackathon for ~ 40 participants.</li></ul>	
AWARDS & GRANTS	<ul style="list-style-type: none"><li>• <b>Best Senior Year Project</b>, ECE Department, SSN</li></ul>	2017
	<ul style="list-style-type: none"><li>• <b>1<sup>st</sup> Place</b> in K!ardinal Quest, a robotic vision event held at Anna University, Chennai</li></ul>	2016
	<ul style="list-style-type: none"><li>• <b>3<sup>rd</sup> Place</b> in Clash of Pirates, a robotic vision event held at NIT, Trichy</li></ul>	2016
	<ul style="list-style-type: none"><li>• <b>SSN Trust Funding for Student Projects</b></li></ul>	2014, 2015
RELEVANT COURSEWORK	<i>Undergraduate:</i> Probability & Random Processes, Embedded & Real Time Systems, OOP & Data Structures, Robotics & Automation, Digital Image Processing, Computer Architecture <i>Independent:</i> Autonomous Navigation for Flying Robots (edX), Kaizen Robotics Program - Basic & Advanced (Lema Labs, India), Embedded System Design using MSP430 (Li2Innovations, India)	
TECHNICAL SKILLS	<i>Tools &amp; Libraries:</i> OpenCV, ROS, PCL, Matlab, Git   Familiar: Android, Eage EDA, L <sup>A</sup> T <sub>E</sub> X <i>Programming Languages:</i> C/C++, Python   Familiar: Java	