AHALYA MANDANA

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EDUCATION

Northwestern University   *anticipated graduation: December 2018*
M.S. in Robotics, **CGPA: 3.675/4**
*Relevant coursework***:** Deep Learning, Introduction to Artificial Intelligence

M.S. Ramaiah Institute of Technology   *June 2017*
B.E. (Bachelor of Engineering) in Electrical and Electronics Engineering, **CGPA: 8.59/10**

PROJECT WORK

Baxter the Laundry Assistant   *December 2017*
- Final group project for ME-495 Embedded Systems in Robotics - to perform a task with the Baxter research robot from Rethink Robotics.
- Wrote custom ROS nodes/services to make the Baxter research robot thread/unthread the lid of Tide bottle.
- Custom ROS subscribers/publishers were created to collect pose data of the lid, to send to the arm
- Project also included AR tag tracking, quaternion multiplication, and inverse kinematics.

Simulation of a somersault on a trampoline   *December 2017*
- Simulated the motion of a person doing a backward somersault on a trampoline, using Mathematica
- Lagrangian dynamics and concepts of rotational inertia were also applied.

Medical and Home Assistant Robot for the Elderly   *January-May 2017*
- Final undergrad group project to build a prototype of a home assistant robot for elderly people with limited mobility: functions included picking/placing small household objects, dispensing medicines, and an emergency text feature to alert family members/doctors. Main hardware used was a Raspberry Pi 3 Model B for image processing and an Arduino Uno board. The primary programming language was Python.
- The robot was controlled by an app, which displayed a live video stream from a webcam fixed on the robot.

e-Yantra Robotics Competition, 2015 conducted by IIT, Bombay   *February 2016*
- Our four member team participated in this all-India robotics competition, organized by the Indian Institute of Technology, Bombay (IIT-B).
- Theme was Recyclable Waste Management and we successfully implemented the code using C programming on ATmega 2560 and ATmega 16A AVR microcontrollers.
- Group was placed among the top 10 teams, across India, in the Recyclable Waste Management category.

WORK EXPERIENCE

Electronics For You Group, Bangalore, *Summer Intern*   *June 2016 - July 2016*
- Internship involved writing articles based on expert talks from 'India Electronics Week 2016', interacting with industry experts to gather additional input for articles for the *Electronics Of Things* portal and 'Electronics For You' print magazine.
- Fields covered: Bluetooth Low Energy and Bluetooth Beacon Applications, Interoperable IoT Solutions, Renewable Energy Microgrids, Security of Things, Human Health IoT, Threat Perception and Attack Scenarios in Automotives.

INDUSTRY INVOLVEMENT

Summer Camp by Free Software Movement Karnataka (FSMK)   *July 2014*
- Attended a two-week residential Open Source coding workshop conducted by FSMK.
- Exposure to NodeJS, MongoDB, Mozilla Webmaker Tools

SKILLS

C	Python	ROS	Rviz	MySQL
Mathematica	HTML	CSS	JavaScript	Git
MATLAB	Gazebo	Assembly Language	Verilog	PSPICE Software