

Abishek Hariharan

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Education

University of Southern California, Los Angeles Jan. 2013 - Dec. 2014
Candidate for Master of Science, Computer Science
Relevant Coursework: Coordinated Mobile Robotics, Robotics, Brain Theory,
Self Organizing Systems, Algorithms, Foundations of AI, Database Systems

Coursera: Machine Learning. 2011

Birla Institute of Technology, Ranchi, India 2007 - 2011
Bachelor of Engineering, Computer Science/Artificial Intelligence

Experience

Course Producer, Viterbi School of Engineering Sep. 2014 - Dec. 2014
Teaching assistant, grader and lab guide for the undergraduate robotics course CSCI 445.

Student Researcher, USC ACT Lab Nov. 2013 - Dec. 2014
Quad rotor vehicle control and planning using feedback controllers and visual localization.

Research Assistant, USC Interaction Lab Jan. 2015 - Aug. 2015
Android application development to model empathy for reducing anxiety in hospitalized children.

Software Engineer, Firmware and Design Validation at Skycatch Inc. Nov. 2015 - Mar. 2016
Creating software solutions to capture and validate metrics from the next generation of aerial robots.

Senior Engineer, Robotics, Soloshot Inc. Apr. 2015 - Present
Architecting an improved CV pipeline to feed into high accuracy motor controllers for target tracking.

Projects

Humanoid Robot Kinematics May. 2014
Arm and leg motions using minimum jerk splines and inverse kinematics for NAO.

Multi Robot Path Planning - A Quadcopter Implementation. May. 2014
Relaxed multi robot path planning problem for quad copters using proprioceptive sensing for energy optimization.

USC Aero Design Team Jan. 2013 - present
► *First Place at 2014 AIAA Student Design/Build/Fly Competition.*
Senior member involved with fabrication, testing and performance sub-teams.
Improved performance of aircraft by employing remote sensing for speed and stability analysis.

Graph-Based Planner AI for Checkers Game 2013
Java based graphical planner for two-player game of checkers.
Improved performance by reducing dimensionality of problem space using pruning and heuristics.

**A Neural Network Approach for Complex Cognition
& Planning in Adversarial Environments** 2013
Modeling of pathological effects observed in subjects affected by Alzheimer's disease using a neural network planner under the conditions of degeneration and synaptic weight disturbance.

Publications

Cooperative Multi-Robot Control for Target Tracking with Onboard Sensing.- Hausman et. al. ISER 2014
Cooperative Multi-Robot Control for Target Tracking with Onboard Sensing.- Hausman et. al. IJRR 2015