Abishek Hariharan

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Education

University of Southern California, Los Angeles   Dec. 2014
 Graduated **(>3.5 GPA)**
 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   Aug. 2011
 Completed **(>3.5 GPA)**
 Bachelor of Engineering, Computer Science/Artificial Intelligence

Technical Skills

Programming Languages: Java, C++, SQL,XML, XQuery, XPath
Applications/Environments: Arduino IDE, ROS, Matlab, Git, Simulink, Vicon Tracker,RDBMS.Oracle 11g +
Spatial, MySQL

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.

System Model for Target Localization Using a Heterogeneous Symbiotic Swarm   Nov. 2013
 Developed control parameters for robotic swarm based on *Physarum Polycephalum using reactive control
 rules.*Studied its capabilities and points of failure in target localizing and path finding.

USC Aero Design Team   Jan. 2013 - Dec. 2014
 ▸ *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.

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.

Student Worker, USC Interaction Lab   Jan. 2015 - Present
 Android application development to model productive empathy for reducing anxiety in hospitalized children

Publications

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