Bharath Satheesh

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EDUCATION

University of California, Berkeley
ELECTRICAL ENGINEERING & COMPUTER SCIENCES, 2017
GPA: 3.3

Carnegie Mellon University
ROBOTICS ACADEMY AND EMBEDDED SYSTEMS
SELECTED AS PART OF TEAM INDIA (ROBOGAMES 2013)

RELEVANT COURSEWORK

- *Data Structures and Algorithms*
- *Introduction to Artificial Intelligence*
- *Probability theory and Random processes*
- *Optimization Models and Applications*
- *Introduction to Machine Learning*

RECENT ENDEAVOURS IN COMPUTER SCIENCE </>

- Managing and designing full scale delivery services product. Selected by Berkeley Citris for the Citris Mobile Application Challenge for 2016.
- Implemented *gesture recognition* with the Spotify API to like or 'upvote' music with the aid of *Computer Vision*.
- Created a *smart calendar* that keeps track of important events with simple *Machine Learning* techniques like single layered neural networks.
- Built a *smart fan* that directs wind flow based on user location.
- Research: K - nearest neighbor approach to solve simple problems like preferred elementary school for a certain neighborhood with *machine learning*.
- Research: Application of control theory to solve *power systems* problems, especially on the transmission grid.

PROFESSIONAL EXPERIENCE

Hybrid Systems lab: *University of California, Berkeley*
UNDERGRADUATE RESEARCH APPRENTICE, MARCH 2015 – PRESENT

- Implemented new functionality for quadrotors to learn its environment based off of simple state and position estimations with unsupervised learning.
- Redesigned a new working code base to control existing hybrid systems for quadrotors and added cross-platform functionality to the existing system.
- Presented solutions from the work at the UTM NASA conference in 2015 on new theory developed in the lab over the course of the internship.

Model Predictive Controls lab: *University of California, Berkeley*
UNDERGRADUATE RESEARCH APPRENTICE, AUG 2014 – NOVEMBER 2014

- Engaged in the field of Model predictive control as well as Artificial Intelligence applied to robotics, through work with self driving cars and extensive simulations.
- Design and understand the importance of filters in controls and its application in error estimations and corrections for vehicles.
- Created a new model of control with Kalman filtering where actual highway measurements are recorded by a real time camera system to mimic and approximate closely to the theoretical estimates of the predicted model.