Bharath Satheesh

2750 Dwight Way, Berkeley, CA 94704 | (510)-710-2674 | bharath.satheesh@berkeley.edu | http://bharathsatheesh.com

Education

University of California, Berkeley
Electrical Engineering and Computer Sciences; Applied Mathematics
Class of 2017; GPA: 3.2

Carnegie Mellon University
Robotics and Embedded Systems (Team India for Robogames 2013)
Class of 2013; Oracle Java Certification.

Experience

Autodesk, Office of the CTO: *Strategic Innovation Intern (June 2016 – September 2016)*

The mission of the OCTO team is to explore, distill, and apply what's next for Autodesk and explain why it matters.

- Lead the development of Autodesk platform for autonomous construction (pick + place + welding) of mesh structures with 6-axis robot arms
- Integrated Autodesk Maya-Fanuc with robot communication to build 1st ever feature film robot-collaboration platform
- Pioneered a cross-platform solution for Autodesk Dynamo catering to *architectural, design and engineering* communities
- Created a robotic *vision and feedback* system ground-up that can build and weld large structures together in tandem without human supervision at a 99.9% accuracy within 1/50th the time

Knapsack Network: *Co-Founder, Product and Design (December 2015-Present)*

Knapsack is the first-ever mobile platform for bartering (exchanging) communities i.e. by trading services from food delivery to grocery shopping, laundry quarter(s) delivery etc. Backed by SDET, Berkeley

- Identified (a potential market value of $500,000 in Berkeley, CA through active user research
- Designed an effective pricing model that would cut user costs by 65% while maintaining service delivery speeds of 1.5X - 2.5X
- Responsible for product development, algorithm design and Advanced Operations (*Machine Learning, Stat. Learning*)
- Selected by CITRIS, Berkeley for Knapsack Network in the prestigious Mobile Application Challenge from over 150 teams with an acceptance rate of 6%
- Check us out @http://knapsack.network/

Hybrid Systems lab: *Research Assistant (March 2015 – Present)*

Research here covers a wide range of topics, including air traffic control automation, algorithms for decentralized optimization, modeling and analysis of biological cell networks, and unmanned aerial vehicle design and control.

- Implemented *target and trajectory tracking* for quadrotors with accurate state estimations using a *PID controller and POMDP*
- Redesigned old non functioning C, Python code base in ROS (Robot Operating System) to create Matlab functionality to test ongoing reachability experiments at the lab
- Created Catkin functionality for ROS code, to collaborate with ETH Zurich on a multi-vehicle test bed used to demonstrate new concepts in multi-agent control on a real-world platform (STARMAC)
- Presented poster at the NASA UTM (UAS Traffic Management) conference in the summer of 2015 on hybrid systems theory

Projects and Activities

- Representing Berkeley Engineering at as part of the 6 member *Senior Students Council* for the graduating class of 2017
- Implemented *gesture recognition* with the Spotify API to like or 'upvote' music with OpenCV, Scikit-learn for Python (PennApps)
- Created a *smart calendar* that keeps track of important events with simple single layered neural networks with C optimizations to enhance speed in data recollection (TreeHacks)
- Held *officer positions at the IEEE* in 2014/2015 in the DevOps, Activities committees respectively
- Represented UC Berkeley at the *AIAA Robo-Ops* competition (hosted by NIA and NASA) at the Johnson Space Center in Texas
- Built a *smart fan* that directs wind flow based on user location with low frequency filtering
- Current Research includes Distributed On-Line Secret Sharing for Secure State Estimation(s) in multi-vehicle systems (*)

Skills

- Proficient at Python, Matlab, Java, ROS, C++ and comfortable with the Linux environment (ask for graduate coursework)
- Fairly proficient at C, C#, SQL, MIPS, Arduino, Robot C, JavaScript, CSS, HTML and the .NET framework
- Recipient of the Oracle Java Certification by Sun Microsystems/ Oracle in 2013
- Passionate about *Ceramic Artwork*, presented my work on the topic 'human conditions' at the Wurster Art gallery, Berkeley, CA