Kautilya Chenna

Contact Information

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Research Interests

Robotics: Perception, Manipulation and Cognition; Machine Learning, Computer Vision.

Education

University of Utah, Salt Lake City, Utah

Master of Science in Engineering, Robotics **August 2016 – present**

- Expected graduation date: May 2018
- Advisors: Dr. Tucker Hermans

BMS College of Engineering, Bangalore, India

Bachelor of Engineering in Mechanical Engineering **September 2011 – May 2015**

Publications

"Planning Multi-Fingered Grasps as Probabilistic Inference in a Learned Deep Network"; Qingkai Lu, **Kautilya Chenna**, Balakumar Sundaralingam, Tucker Hermans; *International Symposium on Robotics Research (ISRR),* 2017. [PDF]

Experience

Learning Lab for Manipulation Autonomy (LL4MA), University of Utah

Graduate Research Assistant **August 2016 – present**

Currently working under Dr. Tucker Hermans on developing a machine learning algorithm that predicts if the robot will be in collision for a given configuration using only pointcloud data and joint states.

NMCAD Lab, Indian Institute of Science

Project Assistant **January 2015 – July 2016**

Worked under Prof. Dineshkumar Harursampath on the project *"Design and Fabrication of a Conventional Flapping Wing Micro Aerial Vehicle."* We worked towards developing a platform for testing various wing designs, materials and mechanisms on the MAV.

Selected Projects

Baxter Grasp Pipeline **January 2017**

- Developed a grasping pipeline to grasp objects on a table.
- Tools Used: PCL, ROS, Moveit, Graspit, tensorflow

Video Action recognition using Deep Learning **October 2016**

- Implemented a Deep Neural Network using tensorflow to classify actions in scenes.
- Achieved a mean average precision of 15.4% on the Charades Dataset.

Skills

Languages: Python, MATLAB, C++, Java.

Tools: PCL (Pointcloud Library), ROS (Robot Operating System), OpenCV, Tensorflow, Blender (3D Graphics), Keras, Graspit Simulator, Gazebo, V-REP.

Design Tools: SolidWorks, PTC Creo Parametric, Autodesk Inventor, ANSYS.

Robots: KUKA LBR4, Rethink Robotics Baxter, SimLab's Allegro Hand , Quanser HD2

Relevant Coursework

Robot Kinematics and Dynamics, Controls (Linear, Nonlinear, and Embedded), Computer Vision, Artificial Intelligence, Motion Planning, Machine Learning, Probabilistic Modeling, System ID for Robotics.

Links

Website: https://chenna.me

Linkedin: https://www.linkedin.com/in/kautilyachenna/

Github: https://github.com/hashb