ALLISON THACKSTON

ROBOTICIST / LEAD ENGINEER and MANAGER

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With a passion for robots and robotic technologies, I bring energy, dedication, and smarts to all the challenges I face. I am highly motivated to work hard and seek out challenges, even in high pressure, deadline driven environments.

EXPERIENCE

Toyota Research Institute, Los Altos, CA — *Manager, Shared Autonomy*

AUG 2016 - PRESENT

I organized and lead various robotics efforts. Tasks included building a cohesive team, designing software architectures, and determining technical requirements. I lead the team to a successful demonstration of technical progress that was recently featured by our CEO, Gill Pratt, at the World Robot Summit.

Toyota Partner Robotics Group, San Jose, CA — *Lead Intelligent Manipulation*

SEPT 2015 - AUG 2016

I brought up and maintained the robotics lab while managing research contracts and conducting my own research. Research included hierarchical task and motion planning, generalizing grasping primitives and behavior tree based artificial intelligence.

Oceaneering (NASA contractor), Houston, TX — *Lead Robotic Perception*

DEC 2012 - SEPT 2015

I designed, implemented, or otherwise authored the majority of software on Robonaut 2 including the Joint Control API, the safety system, the vision architecture and the kinematic controllers. I also managed several crowdsource initiatives.

Night Vision Labs, Fort Belvoir, VA — *Electrical Engineer*

JULY 2005 - SEPT 2015

I developed image processing and target tracking algorithms, managed large data collections and analyzed vendor algorithm performance..

EDUCATION

Georgia Tech, Atlanta, GA — *B.S. EE*

2001 - 2005

University of Hawaii at Manoa, Honolulu, HI — *M.S. ME*

2007 - 2009

Thesis: Autonomous Robotic Manipulation: Collision Avoidance.
Topic covered automatic collision avoidance techniques in a semi-autonomous operation of a 7 degree of freedom robotic manipulator using the novel concept of measure of proximity in solving for actuator position during operation.

SKILLS

C++, Python (primary)
Javascript, C, C#, MATLAB

ROS, Orocos, MATLAB, Simulink, AutoCAD, SolidWorks, Visual Studio

Linux, Windows, OSX

AWARDS

Special Space Act Award, Robonaut 2. NASA recognition of honor for my participation in the Robonaut 2 project

Superior Assistance Award, NASA ER4 Team recognition for going above and beyond to support visiting graduate students and interns.

PROJECTS

Intelligent Manipulation
Leader of Toyota's Intelligent Manipulation team. Duties included determining research direction and managing timelines.

Robonaut 2
Lead of Robotic Perception. Duties included developing the software architecture for the perception stack and incorporating sensor fusion techniques for robustness.