Sharath Jotawar

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Date of Birth: 28/09/1988
Country: Singapore Nationality: Indian

Professional Summary

- 4+ years of software development experience in C, C++, Python.
- Specialized in development of algorithms on vision, motion planning, calibration for robotic automation applications on ROS platform.
- Expert in design and implementation of robotic tasks in a real world and simulation.

Skill Sets

- Programming Languages: C, C++, Python
- Operating System: Linux Ubuntu, Windows
- Software Libraries: OpenCV, PCL, ROS, MoveIt, Gazebo, roslibjs
- Robot Manipulators: Barrett WAM, Universal Robots (UR5, UR10)
- Version Control Systems: Git

Experience

Transforma Robotics Pte Ltd, Singapore as Software Engineer **Mar '18 to Present**
Responsibilities: Development of high-level task planner for complex behavior of robots. Design & development of WebApp for HMI with an autonomous robot. Management of software update and versions with Git.

Tata Consultancy Services, Bangalore, India as Software Developer **Aug '14 to Mar '18**
Responsibilities: Design and implementation of vision and motion planning algorithms for robotic automation of warehouses. Creating client presentation and demos on robotic applications.

Projects:

- Primitives shapes based object model matching using SUPER4PCS for estimation of grasp pose Video.
- Localization of grasp regions on novel objects through 3D geometric surface fitting using Kinect Video.
- Motion planning for an automated pick and place robot in a retail warehouse using MoveIt Video1, Video2.
- An SVD procedure for semi-auto external calibration between robot manipulators and 3d sensors.

Continental Automotive Components India Pvt Ltd as Graduate Engg. Trainee **Aug '10 to May '11**
Responsibilities: Conducting verification of circuit design of different modules in prototype Engine Control Unit.

Achievements & Publications

- Member of team **IITK-TCS** which participated in **Amazon Robotics Challenge**, held in RoboCup 2017, Nagoya, Japan. Won 3rd place in pick task, 5th place in stow task and 4th place in the final round out of 16 teams in the competition. Link: https://sites.google.com/site/swagatkumar/iitk-tcs-arc-2017
- Member of team **IITK-TCS** which participated in **Amazon Picking Challenge**, held in RoboCup 2016, Leipzig, Germany. Achieved 5th place in stow task, 10th place in the pick task out of 16 teams in the competition. Link: https://sites.google.com/site/swagatkumar/home/apc_iitk_tcs
- **Paper:** Motion planning for an automated pick and place robot in a retail warehouse. Accepted at Advances in Robotics 2017, India. ACM DOI: 10.1145/3132446.3134904. Available at: https://sharathrjtr.github.io/docs/Motion_Planning_AIR_2017.pdf
- **Paper:** Design and development of an automated robotic pick & stow system for an e-commerce warehouse. Available at https://arxiv.org/pdf/1703.02340.pdf

Academic Background

M Tech. in Electronics & Electrical Engineering with Specialization in Signal Processing **Institute: Indian Institute of Technology Guwahati (IIT Guwahati), India**	Year: 2012-2014 CPI: 8.34
B.E. in Electronics & Communication Engineering **Institute: BMS College of Engineering, Bangalore, India.**	Year: 2006-2010 Avg: 71.88 %