

Sharath Jotawar

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Date of Birth: 28/09/1988

Country: Singapore Nationality: Indian

Professional Summary

- 5+ years of software development experience in C, C++, Python.
- Specialized in the development of algorithms on computer vision, motion planning for robotic automation.

Skill Sets

- Programming Languages: C, C++, Python
- Operating System: Linux Ubuntu, Windows
- Software Libraries: OpenCV, Keras, numpy, matplotlib, PCL, ROS, MoveIt, Gazebo, roslibjs
- Version Control Systems: Git

Experience

Transforma Robotics Pte Ltd, Singapore as Senior Software Engineer

Mar '18 to Present

Projects:

- Semantic segmentation and detection in an indoor environment for autonomous navigation of robot.
- High-level task planner for complex behavior of robot and backend communication for human machine interface through WebApp.

Tata Consultancy Services, Bangalore, India as Software Developer

Aug '14 to Mar '18

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 %