Prajval Kumar Murali
Robotics Ph.D. Candidate

✉ prajval-kumar.murali@bmwgroup.com

📱 +49 151 753 89 736

📍 Munich, Germany

🌐 prajval10.github.io/

in linkedin.com/in/prajval-kumar-murali

🐙 github.com/prajval10

TOOLS

C/C++ Python ROS

Gazebo

TensorFlow/ Keras

MATLAB/Simulink

OpenCV/ PCL

LANGUAGES

English
● ● ● ● ●

Italian
● ● ○ ○ ○

French
● ○ ○ ○ ○

ROBOTS

Kuka Baxter

Universal Robots

Shadow Robot Hand

MiRo robot Stäubli

Pepper robot

WORK EXPERIENCE

Doctoral Candidate
BMW Group ↗

05/2020 - Present   *Munich, Germany*

Description
- Working on visuo-tactile perception for human-robot interaction. Tasks involve developing algorithms for active robotic exploration, object manipulation and scene understanding. Working on dual robot manipulators to develop platform-agnostic multi-modal perception and learning.

Robotics Software Engineer
Italian Institute of Technology ↗

10/2018 - 04/2020   *Genova, Italy*

Description
- Developed robust 3D perception algorithms with laser acquired point-clouds. Extensive experience with feature detection, pose registration (RANSAC, ICP), hand-eye calibration algorithms. Successfully deployed an application for a large steel industrial plant.
- Maintained the robotics software stack (C++) working at the intersection of research and real-world industrial deployment.

Robotics Engineer Intern
Schaeffler Group ↗

02/2018 - 09/2018   *Kysuce, Slovakia*

Description
- Developed a ROS-based architecture in C++ for a human-robot interaction task using AND/OR graphs. The architecture combined perception, task planning and motion control nodes.

Robotics Engineer Intern
Laboratory of Informatics, Robotics and Microelectronics (LIRMM) ↗

05/2015 - 09/2015   *Montpellier, France*

Description
- Developed an algorithm to perform active calibration of bio-mimetic tactile sensors (BioTac sensors) embedded on the fingertips of a Shadow Robot using regression techniques.

EDUCATION

Master (M.S) in Robotics Engineering
Ecole Centrale de Nantes & University of Genova ↗

09/2016 - 09/2018   *Nantes, France & Genova, Italy*

Bachelor (B.Tech) in Instrumentation and Control Engineering
National Institute of Technology ↗

07/2012 - 07/2016   *Tiruchirappalli, India*

PUBLICATIONS

Deployment and Evaluation of a Flexible Human-Robot Collaboration Model Based on AND/OR Graphs in a Manufacturing Environment ↗
Prajval Kumar Murali, K. Darvish, F. Mastrogiovanni, *Journal of Intelligent Service Robotics*

A Flexible Software Architecture for Robotic Industrial Applications
A. Rendiniello, **Prajval Kumar Murali,** *et al. IEEE International Conference on Emerging Technologies and Factory Automation (ETFA) 2020*

Active calibration of tactile sensors mounted on a robotic hand ↗
B. Navarro, **Prajval Kumar Murali,** *A. Fonte, P. Fraisse, G. Poisson, and A. Cherubini, IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2015*