

Sushant Vijay Chavan

📍 Bonn, Germany (Open to relocation) 🔗 <https://sushant-chavan.github.io>
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WORK EXPERIENCE

Student Research Assistant

KELO Robotics GmbH

📅 Jul 2020 – Aug 2022 📍 Sankt Augustin, Germany

- Propose and use a novel indoor semantic map representation
- Design and implement single/multi robot simulation software using Gazebo and Unity3D (with ROS-Sharp) respectively

Student Research Assistant

ROPOD Project, Hochschule Bonn-Rhein-Sieg

📅 Jun 2019 – Apr 2020 📍 Sankt Augustin, Germany

- Develop a flexible Gazebo-based simulator for testing high-level execution of tasks by an arbitrary sized fleet of mobile robots
- Setup and maintain continuous integration of software packages

Senior Software Engineer

Robert Bosch Engineering and Business Solutions Private Limited

📅 Sep 2013 – Dec 2017 📍 Bangalore, India / Hildesheim, Germany

- OpenSceneGraph & Navigation Data Standard (NDS) based 3D map visualization application for in-vehicle infotainment systems
- Implement highly optimized algorithms for rendering 3D building models on embedded devices with limited computing power

RELEVANT PROJECTS

Composable Ontology-based Indoor Semantic Map

Master Thesis, Hochschule Bonn-Rhein-Sieg

- A novel framework to flexibly compose new maps from a prior collection of heterogeneous metric-semantic indoor maps
- Employ an ontological knowledge-base together with the composed maps to plan context-dependent indoor navigation plans

Simulator for modular KELO ROBILE mobile robots

KELO Robotics GmbH

- A ROS package to simulate arbitrary configurations of modular mobile robots in Gazebo with an option to activate true physics-based wheel motion, resulting in the motion of the platform

Comparative evaluation of experience-based path planners for multi robot systems

Hochschule Bonn-Rhein-Sieg

- Port and quantitatively evaluate the suitability of using single robot experience-based path planners for a fleet of logistic robots, using a custom-developed benchmarking framework

EDUCATION

M.Sc. in Autonomous Systems

Hochschule Bonn-Rhein-Sieg, Germany

📅 Apr 2018 - Sep 2022

German GPA 1.1

B.E. in Electronics and Communications

Visvesvaraya Technological University, India

📅 Aug 2009 - Jun 2013

Distinction with an aggregate score of 82%

ACHIEVEMENTS

- ✍ Co-authored a patent filed by Robert Bosch Car Multimedia GmbH
- 🎓 Awarded the *Deutschlandstipendium* (German Scholarship) 2019/20
- 🌟 Awarded the *Fresher Of The Year 2013* at Robert Bosch, India
- 🎓 Awarded the *CSSS 2009 Scholarship* by the Ministry of Human Resource Development (MHRD), India

TECHNICAL SKILLS

Programming Languages

Modern C++ Python Shell Scripting

Libraries/Frameworks/Tools

Git ROS PCL CGAL OpenCV
hdl_graph_slam mcl_3dl OctoMap
URDF Xacro ROS# Gazebo Unity
OWL 2 SWRL Protégé Owlready2
PlantUML Doxygen GitLab CI Docker
CMake Jupyter VS Code Linux

Competencies

Indoor robot navigation Robot simulations
Classical AI (Search, Logics, & Planning)
Semantic mapping Multi-agent systems