

Sachin Kumar

Robotics Enthusiast & Engineer

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EXPERIENCE

ACCELERATION ROBOTICS, India — Robotics Engineer

AUGUST 2022 - DECEMBER 2022

AMR Robot Programming with ROS and ROS2, Implemented various features of Autonomous Navigation and SLAM, Hardware Integration of Motor Driver, LiDAR and Camera sensors with ROS/ROS2, Fleet Management System for AMR with OpenRMF.

Recruit Robots, Saudi Arabia — Robotics Engineer

OCTOBER 2021 - JULY 2022

AMR Robot Programming with ROS and ROS2, Implemented various features of Autonomous Navigation and SLAM, Hardware Integration of Motor Driver, LiDAR and Camera sensors with ROS/ROS2, Fleet Management System for AMR with OpenRMF.

TechnoYantra, India — Robotics Engineer

JUNE 2020 - SEPTEMBER 2021

ROS Developer, Autonomous Mobile Robots with ROS, Trajectory Planning for Manipulators, Hardware Integration of various Embedded Systems.

EDUCATION

University of Applied Sciences and Arts, Dortmund — Masters Embedded Systems Engineering

OCTOBER 2022 - PRESENT

Embedded Systems Engineering leads to a degree which qualifies both in the field of scientific research as well as in areas of professional practice.

Gulzar Group of Institutes, Ludhiana — Bachelors Automation & Robotics

JULY 2016 - JUNE 2020

Robotics Automation is a discipline that comprises knowledge and skills from various engineering fields, which include electronics, electrical, mechanical, computer, software, and communication engineering.

SKILLS

C++, Meta Programming,
OpenCL/CUDA, Java, Python

ROS/ROS2, Navigation Stack,
Moveit, OpenRMF

AI and Deep Neural Networks
Data Science, Data Analytics,
Tensorflow, Keras, KNN, CNN

Flutter Framework, Django,
Flask, Android

Embedded System
Programming, AVR
Microcontroller, Raspberry Pi,
Jetson Nano

LANGUAGES

ENGLISH C1 Proficiency,
GERMAN A2 Proficiency,
HINDI Native

HVM Convent Sr. Sec. School, Ludhiana — High Senior Secondary

APRIL 2014 - MARCH 2016

PROJECTS

Teleop Robot with Mobile App — 01/06/2021 – 31/07/2021

Mobile Application created with Flutter Framework used to control the robot in the Simulation with ROS. The Flutter provides a ROS Client Library which is used to enable the communication between the Simulated Robot and Mobile Application to Control it by Joystick.

GUI App for Manipulator — 01/04/2020 – 30/06/2020

A GUI application is built to control the 6 DOF Manipulator in ROS. The app is built using Qt framework with python which uses the ros python library to communicate with the MoveIt to send the move robot arm.

Turtlebot3 GPS Navigation — 01/01/2020 – 31/03/2020

Turtlebot3 is a ROS based mobile robot, which is used to navigate through the GPS Coordinates sent from the Web Application and use the navigation stack to plan the path and follow the trajectory.

Smart Farming with IoT — 01/08/2019 – 11/2019

Smart Farming is about using the sensors like humidity sensor and temperature sensor to evaluate the requirements of the soil for the plants to grow. The sensors are connected with the NodeMCU which uses the MQTT protocol to send the sensor data to the MQTT Broker. From there, this data is visualized on the mobile application built by Flutter SDK.

HOBBIES AND INTERESTS

Reading Books

I like to read books which are related to business, fiction and technology. I had read the book "Rich Dad Poor Dad" by Robert Kiyosaki and "Programming Robots with ROS" by Brian Gerkey. Also, I read other books in the form of e-books and audio books, as they are easy to carry along and can be used anytime and anywhere.

Playing Games

In my free time, I play Cricket and Volleyball with my friends and also sometimes play video games. Mostly, I play multiplayer games in which the user needs to make strategies to win the game. For instance, DOTA2 and PUBG.