

# Kapil Deshpande



Cell Phone:  
Email: [kapildeshpande041193@gmail.com](mailto:kapildeshpande041193@gmail.com)  
LinkedIn: [www.linkedin.com/in/kapil-deshpande-041193](https://www.linkedin.com/in/kapil-deshpande-041193)  
Github Profile: <https://github.com/kapilPython>  
Nationality: Indian  
Date Of Birth:

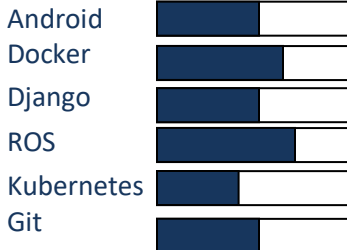
## Skills:

### Technical Skills:

#### 1) Programming languages:



#### 2) Frameworks and Software:-



### Soft Skills-

Keen learner

Multitasking

Team Leader and Player

R&D Experience @ZF

Close to 2 years IT experience

## Languages known:

English – IELTS (7.0/9.0)

German – (A2)

Hindi – (Native Proficiency)

## Awards and Achievements:

- Selected in top 150 Microsoft Azure Hackathon Ideas out of 8507 ideas, May 2020
- Was Awarded best contribution to the project (TCS-GE) October 2017
- Won first prize in “Wireless Robotics Competition” at NIT Surat (Gujarat) , 2013-14

## KEY STRENGTHS:

An ambitious Electrical Engineering master graduate majoring in Automation and Robotics. Excellent software modeling and problem analyzing skills with good knowledge of sensors involved in Autonomous robotics systems. Fascinated with Industry 4.0 and role of robots in industry, autonomous driving and services.

## EDUCATION:

Sep 2018 – April 2021	Master Studies in International Master Electrical Engineering and Information Technology (IMSEIT) (Major Automation) <ul style="list-style-type: none"><li>System Design (C++ and UML)</li><li>Advanced Information Technology (Java and basics of Distributed Systems)</li><li>Autonomous Systems</li><li>Discrete Event Systems</li></ul>
Aug 2012 – July 2016	Bachelor of Engineering S.A.T.I. Vidisha (M.P.) India Electronics and Communication Engineering (7.92/10)

## PROFESSIONAL EXPERIENCE:

Aug. 2020 – Feb. 2021	<b>Master Thesis at ZF Friedrichshafen AG</b> , Multi Robot Simulation and traffic optimization for autonomous mobile robots. <ul style="list-style-type: none"><li>Research on scalable multi-robot simulation using ROS and Gazebo.</li><li>ROS and Kubernetes (Openshift) experiments to prove feasibility of cloud robotics.</li><li>Integration of VD(M)A5050 protocol to an open source traffic optimizer considering MQTT message transport.</li></ul>
Oct. 2019 – Aug. 2020	<b>Intern at ZF Friedrichshafen AG</b> , research and development intern <ul style="list-style-type: none"><li>Developed VD(M)A5050 protocol for connectivity of Autonomous mobile robot.</li><li>Data acquisition system for ZF Pro AI and etherCAN with HMI development support.</li><li>Worked with ROS, CANalyzer, C++, Python, HTML, Node-Red, Javascript and MQTT.</li></ul>
Dec 2016 – Aug 2018	Assistant System Engineer <b>Tata Consultancy Services Ltd., Mumbai (India)</b> <ul style="list-style-type: none"><li>Automated a business process in Oracle ERP which generated 6 million US dollars saving.</li></ul>

## **ACADEMIC PROJECTS:**

March 2021

### ***ROS on Azure IOT Hub:***

1. Experiment with Azure IOT Hub Device Twin
2. Visualize data sent on Azure IOT Hub using node-red
3. Use of Azure Container Instances

May 2020 – June 2020

### ***RAAS(Robot As A Service):***

1. Main aim is to monetize robot work securely and second use case being sharing of robots securely.
2. Writing a smart contract to maintain state of each robot deployed on the blockchain.
3. A REST-API based connection to Ethereum blockchain
4. Running robot simulation (ROS + Gazebo) on Azure cloud.

Mar 2019 – Jul 2019

### ***ARIS (Autonomous Robot for Industrial Services):***

- 1) Main aim is to automate material movement on shop floor using SLAM based on autonomous robots.
- 2) Android application to send input information to robot and receive completion notification.
- 3) Key technologies or hardware –ROS, android, Firebase, LiDAR, Ultrasonic sensors, KUKA YOUNBOT and ROS nodes on Arduino and nodemcu.

Oct 2018 – Jan 2019

### ***Navigation System (A coding exercise without GUI) :***

- 1) Application based upon OOPS concept of C++.
- 2) Used UML to simplify problems using class diagrams, state diagrams, activity diagrams and sequence diagrams.
- 3) Implementation of the same was done through core Java too and class.

Oct 2018 – Jan 2019

### ***FlashLight App:***

- 1) An app using android framework with Java as primary language
- 2) Included understanding of GUI elements (with XML)
- 3) Background thread and services like Async task in android framework were even implemented.

2015-16

### ***Internet Of Things Application Home Automation*** (Major Project):

- 1) Project built using Arduino Uno R3 and esp8266 (node MCU)
- 2) Coded Arduino to send and receive the data to the server through Wifi.
- 3) The project could control the lights and other switches over the internet.

## **EXTRACURRICULARS:**

- Participated in IMSEIT Student Rallye (5<sup>th</sup> September 2018)
- Participated in Intercultural Training on 6<sup>th</sup> and 7<sup>th</sup> September 2018
- Six Sigma Green Belt Proficiency (TCSL) January 2018
- Member and founder of the electronics club named CLUB'O'E under electronics and communication department.
- Participated as Campus Ambassador for the event MindBend NIT Surat (Gujarat), 2013-2014

## **CLOUD SKILLS:**

- Azure Container Instances, Azure IOT Hub, Azure Virtual Machines, Azure Kubernetes Services
- AWS Robomaker
- Redhat Openshift Cluster