

# Vibhor Aggarwal

Master's Student, Automotive Engineering RWTH Aachen

24

24 February, 1996 (23years)

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6

C++,C

4

Matlab,Simulink

4

FEA(Ansys, Abaqus)

4

Gazebo

2

ROS.YARP

2

Languages\*
English

6

Hindi

6

German

3.5

Italian

1.5

\*Scale 1:Beginner to 6:Proficient

Projects' Photos-videos -



### Summary

Automotive engineer with experience in cutting edge research on robot and vehicle dynamics. Interested to work in the field of Automated driving or Modern vehicle systems, like ADAS, BSC.

#### Education

M.Sc, Automotive Engineering RWTH Aachen, Germany

B.Tech, Major: Mechanical Engineering

Minor: Applied Mathematics

Indian Institute of Technology Kanpur(IIT), India

#### Achievement and Awards

Best Under-Graduate project in Mechanical Engineering: IIT Kanpur 2017 Ranjan Kumar Memorial Award for best socially relevant project: IIT Kanpur 2017 Ranked 3rd in state and 914 among 1.4 million students: Joint Entrance Exam2013 Gold Medal in National Mathematics Olympiad: AISMTA 2013

#### **Experience**

Student research assistant C++ Simulink
Institute of Automatic Control, RWTH Aachen, Germany

May 2019-Present

Sep 2018-Present

July 2013-June 2017

- itate of Automatic Control, KW III Auchen, Germany
- Sensor fusion for Navigation and path planning of an Unmanned Aerial Vehicle
   Creating a C++ framework using inter-process-communication via UDP

Research Fellow, Simulink YARP Gazebo C++
Guide: Dr. Daniele Pucci, DIC lab
Rese

Nov 2017-Aug 2018

Guide: Dr. Daniele Pucci, DIC lab

Research center for Human-Robot Collaboration
Italian Institute of Technology, Genova, Italy

- Implemented low level torque control framework for Humanoid robot, iCub
- Identified transfer function between Voltage and iCub's joints' torque

Graduate Engineer Trainee MS Excel TPM Hero Motocorp Ltd, Haridwar, India

July 2017-0ct 2017

World's largest two-wheeler company

- · Managed TPM for machine quality, process inspection and resource planning
- Produced machined parts by programming and setting up the CNC machine

Intern, Mechanical Design Engineer CAD FEA Grey Orange Robotics Pvt. Ltd, Gurugram, India

May 2016-July 2016
Warehouse Automation firm

- Designed suspension of a bi-directionally scalable material handling robot
- Optimized assembly using Design for Manufacturing and Assembly techniques

## Projects

Robotic Exoskeleton Arm CAD Matlab FEA Guide: Dr. Sumit Basu, IIT Kanpur, India

Aug 2016-April 2017
Best Under graduate project at IIT Kanpur

- Exploited Pneumatic Air Muscles, based on Proportional pressure pneumatics
- Provided improved mobility to people in old age and Cerebral Palsy patients

Off-road Vehicles CAD Matlab FEA
Guide: Dr. Avinash Kumar Agarwal, IIT Kanpur

Dec 2013-Jan 2016
For Event similar to FSAE & Baja SAE

- Created/optimised mathematical models for multi link suspension systems
- Vehicle was among top 5 teams from more than 45 national teams

#### Other Information

- Led the Motorsports team at IIT Kanpur, with more than 25 members. Eventually being the Best-technical ready team in the competition
- Interested in Abstract art, Neurology, Philosophy, Psychology