

# Vibhor Aggarwal

Master's Student, Automotive Engineering RWTH Aachen

24 February, 1996 (23 Years)



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Skills\*

5

Matlab, Simulink

5

CAD(Solidworks, Autodesk Inventor)

6

FEA(Ansys, Abaqus)

4

Gazebo

3

ROS, YARP

3

Languages\*

English

6

Hindi

6

German

3.5

Italian

2

\*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 Robotic Manipulation and Path planning.

## 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**

- Sensor fusion for Navigation and path planning of an Unmanned Aerial Vehicle
- Creating a C++ framework using inter-process-communication via UDP

Research Fellow, C++ Gazebo Simulink YARP ♀ Italy 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

**♀** India July 2017-Oct 2017 World's largest two-wheeler company

Sep 2018-Present

July 2013-June 2017

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

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

## [Projects]

Robotic Exoskeleton Arm CAD FEA Matlab 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 FEA Matlab

Dec 2013-Jan 2016

Guide: Dr. Avinash Kumar Agarwal, IIT Kanpur For Event similar to FSAE & Baja SAE

- · Created/optimised mathematical models for multi link suspension systems
- Rated as one of top 5 teams for design from more than 45 national teams

# Additional 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 expressionism, Philosophy, Hiking, Running