

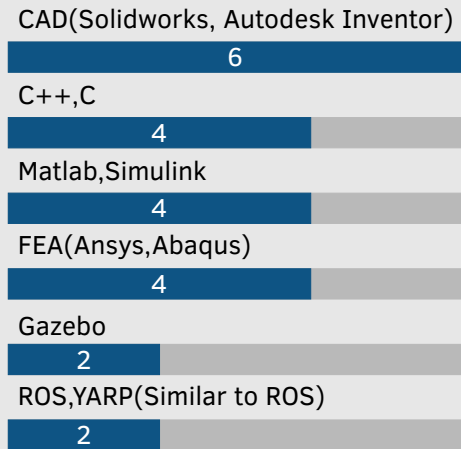


# Vibhor Aggarwal

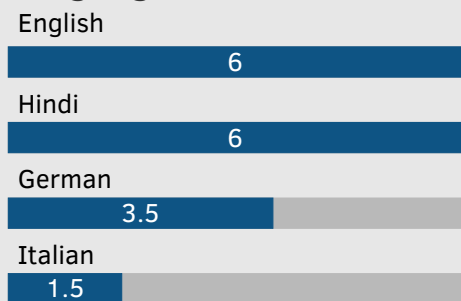
Master's Student, Automotive Engineering  
RWTH Aachen

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## Skills\*



## Languages\*



\*Scale 1:Beginner to 6:Proficient

## Projects' Photos-videos



## Summary

Automotive engineer with experience in cutting edge research on Human-robot collaboration and vehicle dynamics. Interested to work in the field of Automated driving or Modern vehicle systems, like Electronic stability control.

## Education

*M.Sc, Automotive Engineering* Sep, 2018-Present  
RWTH Aachen, Germany

*B.Tech, Major: Mechanical Engineering* July 2013-June 2017  
*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 Exam 2013  
Gold Medal in National Mathematics Olympiad: AISMTA 2013

## Experience

*Student research assistant* C++ Simulink May 2019-Present  
Institute of Automatic Control, RWTH Aachen, 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, DIC lab* Simulink YARP Gazebo C++ Nov 2017-Aug 2018  
Guide: Dr. Daniele Pucci  
Italian Institute of Technology, Genova, Italy Research center for Human-Robot Collaboration

- 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 July 2017-Oct 2017  
Hero Motocorp Ltd, Haridwar, India World's largest two-wheeler company

- Managed Total Productive Maintenance(TPM) for machine quality, in-process inspection and resource planning
- Produced machined parts by programming and setting up the CNC machine

*Intern, Mechanical Design Engineer* CAD FEA May 2016-July 2016  
Grey Orange Robotics Pte. Ltd, Gurugram, India 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 Aug 2016-April 2017  
Guide: Dr. Sumit Basu, IIT Kanpur, India 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 Dec 2013-Jan 2016  
Guide: Dr. Avinash Kumar Agarwal, IIT Kanpur For Event similar to FSAE & Baja SAE

- Created/optimised mathematical models for upto 5-DOF suspension systems

## Other Information

Lead the Motorsports team at IIT Kanpur, with more than 25 members. Eventually being the Best-technical ready team in the competition