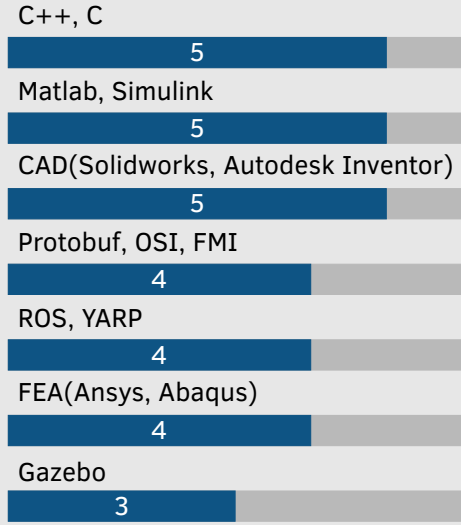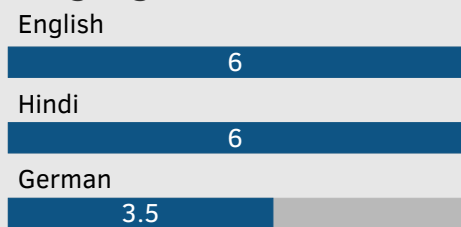# Vibhor Aggarwal

Master's Student, Automotive Engineering
RWTH Aachen

- 24 February, 1996 (24 Years)
- Brückenstraße 23, Stuttgart Germany
- (+49)17659896222
- vibhoraggarwal.github.io
- vibhor.aggarwal@rwth-aachen.de

Skills*

C++, C
5

Matlab, Simulink
5

CAD(Solidworks, Autodesk Inventor)
5

Protobuf, OSI, FMI
4

ROS, YARP
4

FEA(Ansys, Abaqus)
4

Gazebo
3

Languages*

English
6

Hindi
6

German
3.5

*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 Advanced Driver Assistance Systems, Automated Driving, and Electro-mobility.

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 914th nationally among 1.4 million students in JEE	2013
Gold Medal in National Mathematics Olympiad: AISMTA	2013

Experience

ADAS simulation Engineer `C++` `FMI` `Protobuf`   📍Germany   June 2020-Present#
ETAS GmbH, Stuttgart, Germany   Bosch subsidary for Embedded system support

- Logging OSI messages using FMI, in COSYM, a co-simulation software
- Generating FMU models, using C++ Protobuf library for ADAS SiL simulation

Student research assistant `C++` `Simulink`   📍 Germany   May 2019-Mar 2020
Institute of Automatic Control, RWTH Aachen, Germany

- Created a C++ framework using inter-process-communication via UDP
- Data acquisition and time synchronisation among IMU and GNSS sensors

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

- Managed TPM for machine quality, process inspection and resource planning

Mechanical Design Engineer `CAD` `FEA`   📍 India   May 2016-July 2016
Grey Orange Robotics Pvt. Ltd, Gurugram, India   Warehouse Automation firm

- Designed suspension system of a material handling Automated Guided Vehicle

Projects

Robotic Exoskeleton Arm `CAD` `FEA` `Matlab`   Aug 2016-April 2017
Guide: Dr. Sumit Basu, IIT Kanpur, India   Best Under graduate project at IIT Kanpur

- 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

Additional Information

- Led the Motorsports team at IIT Kanpur, with more than 25 members.
- Interested in Abstract expressionism, Philosophy, Psychology, Cycling

Last updated: August 13, 2020