Vibhor Aggarwal

Master's Student, Automotive Engineering
RWTH Aachen

24 February, 1996 (23years)
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Skills*

C++,C
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
2.0

*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 and Advanced Driver Assistance Systems.

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, Simulink YARP Gazebo C++ — 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 — 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
- Produced machined parts by programming and setting up the CNC machine

Intern, Mechanical Design Engineer CAD FEA — May 2016-July 2016
Grey Orange Robotics Pvt. 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 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, Psychology, Hiking