

Abhishek Bhagwat

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CAREER SUMMARY

First-year master's student in Automotive Engineering at CU-ICAR with a total of 2.5 years' experience in the mechanical field. Specializing in powertrain and autonomy. Skilled in Matlab, Simulink, Computer-Aided Design (CAD) and Finite Element Analysis (FEA). Actively seeking internship opportunities for Summer 2020

EDUCATION

Master of Science in Automotive Engineering

Aug 2019-Aug 2021

Clemson University International Centre for Automotive Research (CU-ICAR)

Bachelor of Engineering in Mechanical

May 2012-May 2016

University of Pune

First Class

ACADEMIC PROJECTS

- **Adaptive cruise control and autonomous lane-keeping**
Developed adaptive cruise control and autonomous lane-keeping systems for a scaled 1/10th car using ultrasonic sensors and PID and LQR controllers. (Video - <https://cutt.ly/8e2t6TG>)
 - **Designing a battery-electric vehicle**
Designed a battery-electric vehicle by making design choices of six different subsystems perspectives: body-in-white, packaging, vehicle dynamics, powertrain, human factors, and systems integration by using a model-based approach.
 - **SAE Supra (Formula Vehicle)**
In a team of twenty-five, successfully designed and manufactured a formula vehicle. I was the head of the Powertrain and CAE department and was involved in -
 - Designing the custom air intake system for our carbureted engine, performing CFD analysis on the design in Star CCM+ and further manufacturing it using sheet metal.
 - Performing front, side and rear crash analysis of our rollcage and carrying out the structural analysis of wheel hub, knuckle and engine mounts.
 - Designing paddle shifters using solenoids.
 - Assisting in various manufacturing processes like welding, cutting, grinding etc.
 - Worked with Mahle Behr in designing the sponsored radiator for our vehicle.
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WORK EXPERIENCE

Parallel Learning

Sept 2016 – Sept 2018

Mechanical Process Engineer (Team Lead)

Pune, MH - India

I have worked with Parallel Learning as a Mechanical Process Engineer. Parallel Learning works closely with the industrial engineering department of multiple MNCs to develop digital training modules to reduce quality, service and safety-related issues by proper training of employees on industrial processes. I studied various engineering processes which involved different machines and plant operating procedures to create innovative learning solutions. Some of the projects that I played a key role in were -

- Developing digital training modules of the process of bearing assembly (Deep Groove Ball Bearing, Spherical Roller Bearing, Precision Bearings etc.) for Schaeffler.
- Designing lift door assembly in CAD for digital lift installation manual for Schindler.
- Surveying multiple industries to develop visitor safety induction for them.
- Implementing lean manufacturing, 5S, Kaizen and Kanban systems in small scale industries
- Developing training modules for operating injection moulding machine to manufacture automotive components for Illinois Tool Works.
- Developing Safety Modules for Praj Industries & Alfa Laval aimed at training workers on performing manufacturing processes like Welding, Shot Blasting and Grinding.
- Played an instrumental role in setting up standard operating procedures for our company along with the co-founders.

Motionics

Dec 2018 – July 2019

Design Engineer

Austin, Texas/Pune, India

At Motionics, as a remote design engineer, I worked on designing various components like dial indicators, pelican case, adapters and the pressure sensor in the CAD software - Catia. These were Motionics's best-selling products. Further, I rendered these products in Keyshot and developed animations to explain how these products work. Following are the two projects I worked on -

- Designed and rendered the components for the crankshaft deflection test kit and further created a training module to help customers understand how to use the test kit.
- Designed and rendered the components for the pile load test kit and created a training module to help customers understand how pile load testing works and how to use the kit to do the same.

SOFTWARE SKILLS

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|------------|--------------|--------------|----------------|---------------|
| • MATLAB | • Catia | • Hypermesh | • Hyperview | • Adobe Suite |
| • Simulink | • Solidworks | • Optistruct | • Office Suite | • Keyshot |

ADDITIONAL DETAILS

- A member of the Young Inspirators Network (NGO) for 2 years. Volunteered for social causes like teaching children on weekends and helping the police to control the crowd during festivals
- Chief coordinator of the event "Creative Design-3D" at the national level event "Innovision".
- Proficient in graphic designing and video production.
- A novice Violin player.