# ROHIT GARUD
## Project Consultant

Self-motivated individual with a passion for lifelong learning and a proven record of completing tasks with quality in a timely manner

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## WORK EXPERIENCE

### Project Consultant
Self-Employed

*08/2020 - Present*                                    *Pune*

Achievements/Tasks
- Consulted for 35+ projects from different domains
- End-to-end projects from domains including computer vision, machine learning, autonomous vehicles, electric vehicles, optimization, dynamics, composites, FEA

### Project Assistant-3 (SRF)
CSIR-National Aerospace Laboratory

*06/2019 - 06/2020*                                    *Bangalore*

Achievements/Tasks
- FEA simulation of indigenous light transport aircraft component
- FEA simulation of Mode-I, Mode-II and Mixed-Mode fracture toughness with ABAQUS and plug-in development with Python
- Automation of manual modeling technique with TCL scripting

### Project Intern
Valdel Advanced Technologies Pvt.Ltd.

*10/2018 - 12/2018*                                    *Bangalore*

Achievements/Tasks
- Assistance in composite material specimen preparation and testing using Universal Testing Machine
- ABAQUS plug-in development for folded core sandwich structure using Muira-Ori folding pattern

## EDUCATION

### M.E. in Design Engineering
Maharashtra Institute of Technology, Pune

*09/2016 - 09/2018*                                    *CGPA: 8.75*

Courses
- Thesis: Effect of Nanofillers on Fatigue Performance of Fiber Reinforced Composites
- Project: Stacking Sequence Optimization of Composite Material Beams

### B.E. in Mechanical Engineering
JSPM's JSCOE, Hadapsar, Pune

*06/2010 - 06/2014*                                    *Grade: 64.5%*

Courses
- Thesis: Design of Subsonic Wind-Tunnel and Force Measurement with Flow Visualization Over Aerodynamic Bodies
- Member of college team for national level SAE BAJA ATV competition (2012-2013)

## SKILLS

Python   MATLAB   SQL   Data Analytics   PyTorch   Django   Flask   HTML/CSS   Technical Writing

## PROJECTS

SI engine sensor fault detection and isolation using machine learning (MATLAB) (10/2022 - 01/2023)

Facial keypoint detection and emotion recognition of the driver using machine learning (MATLAB) (06/2022 - 09/2022)

Driver drowsiness and distraction detection using machine learning (PYTHON) (02/2022 - 05/2022)

Emotion recognition with machine learning using physiological information of driver (MATLAB) (02/2022 - 05/2022)

Autonomous vehicle localization and mapping using camera images (MATLAB) (10/2021 - 01/2022)

Autonomous vehicle perception sensor simulation using Unity game engine (06/2021 - 08/2021)

State of health (SOH) estimation of Lithium-ion battery for EV using machine learning (MATLAB) (06/2021 - 08/2021)

Co-simulation of autonomous race car using SIMULINK-Unreal Engine 4 with multiple sensors (MATLAB) (10/2020 - 01/2021)

Simulation of Electric Vehicle (EV) powertrain with PI control using MATLAB/SIMULINK (10/2020 - 01/2021)

## ACHIEVEMENTS

GATE Qualification (03/2018 - 03/2021)
*Marks: 43.76 (446)*

GATE Qualification (03/2015 - 03/2018)
*Marks: 50.35 (539)*

## AREAS OF INTERESTS

Machine Learning   Optimization   Automation