

Garima Chauhan

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LinkedIn: <https://www.linkedin.com/in/garima-chauhan-83b27860/>

Github: <https://github.com/GarimaChauhan16/> Bio: <https://garimachauhan16.github.io/>

Education:

- **Northwestern University, Chicago, Illinois (2019)**
Data Science Bootcamp
- **Indian Institute of Technology Delhi, India (2012)**
Master of Technology in Design Engineering from the Department of Applied Mechanics
- **College of Technology Pantnagar, India (2010)**
Bachelor of Technology in Mechanical Engineering

Skills:

FE Modelling: Hypermesh, Simlab, Hyperworks

Solver: MSC Nastran, Abaqus, Ansys

Post Processing: Hyperview

Fatigue life prediction: FEMFAT, Fe-safe

Optimization: Optistruct

Languages: VBA, Python, SQL

Data Manipulation & Visualization: Pandas, Matplotlib, Tableau, HTML/CSS/JavaScript, D3, Plotly, Leaflet, Web scraping, ETL

Machine Learning: scikit learn, tensorflow

Others: Flask, Git, Data Analytics, Jupyter Notebook, Machine Learning, Structural Analysis, Fatigue Analysis

Experience:

Mercedes Benz Research & Development India

Apr 2017 - Mar 2019

Senior CAE Analyst

- Static (Linear/ non-linear) finite element stress analysis, Fatigue Analysis, Failure simulation, Test Data correlation, Life cycle calculation for the transmission components of Mercedes Benz and AMG cars.
- Suggested design modifications to improve the fatigue life of the components by **40%**.
- Created Tableau visualization for potential field quality issue based on predictive analytics over historical quality performance and testing data.
- Cross department collaboration with design and test teams to resolve open field issues.

Escorts Ltd.

Dec 2014 - Nov 2017

Manager- Engineering Services

- Static (Linear/ non-linear) finite element stress analysis for the tractor components.
- Collaborated with the testing team for the design validation and test correlation.
- Designed and implemented a SQL optimization model to plan incoming testing parts for required completion dates based on BOM, inventory, routing and resource capacities data to ensure on time delivery and developed a Tableau dashboard for tracking progress against planned activities.
- Created new analysis guidelines for and SOPs which helped improve the analysis process and reduced physical test time.

Mahindra & Mahindra Ltd. India

Aug 2012 – Nov 2014

Deputy Manager- Tractor CAE

- Static (Linear/ non-linear) finite element stress analysis, Fatigue Analysis, Failure simulation, Life cycle calculation for the tractor components.
- Weight optimization using multi- constraint model.
- Created load case documents for the test load conditions to improve the analysis process.
- Created a design calculator for optimum component designs based on fatigue life requirement to reduce the **cost** and **time** of the design cycle by up to **35%**.

Projects:

- **Pyber** (<https://github.com/GarimaChauhan16/Pyber>): Data visualization using Pandas DataFrame and Matplotlib to showcase relationships between the key-variables for a ride sharing company.
- **Weather Changes** (<https://github.com/GarimaChauhan16/WeatherPy>): Summary statistics and visualizations created using Pandas, and Matplotlib for the data pulled from OpenWeatherMap API to analyze changes in weather with respect to distance from the equator.
- **Chicago Housing Prices** (<https://github.com/GarimaChauhan16/Chicago-Housing-Prices>): A multi linear regression model using scikit learn to predict housing prices in Chicago based on multiple factors.
- **Belly Button Biodiversity** (https://github.com/GarimaChauhan16/Plotly--Belly_Button_Biodiversity): Full-stack application(<https://belly-button-biodiversity-g.herokuapp.com>) to build an interactive dashboard exploring the Belly Button Biodiversity Dataset using Plotly.js, Flask and Heroku.
- **CTA Ridership Visualization** (<https://github.com/GarimaChauhan16/CTA-Ridership-Visualization>): Web Visualization Dashboard for CTA ridership data using HTML, D3, Javascript, Plotly and Leaflet, PostgreSQL and Flask App.