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.