**Garima Chauhan**

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

A mechanical engineering postgraduate from Indian Institute of Technology, Delhi, India having worked for 6 years as Computer Aided Analyst in various automobile Industries across India on individual as well as team projects. Recently graduated from **Data Science bootcamp program** from **Northwestern University Chicago** with technical abilities in advanced **Python programming and web scraping**. Maintains an insatiable curiosity to acquire new skills and tackle challenging tasks.

**Technical Skills**

Languages: VBA, Python, R, SQL

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

Machine Learning: scikit learn, tensorflow

Database: mySQL, postgeSQL, mongoDB

Other: Git, Flask

**Projects**

**Pyber |** <https://github.com/GarimaChauhan16/Pyber>

* This project deals with the data of a hypothetical ride sharing company called "Pyber".
* The data contains information about every active driver and historic ride, including details like city, driver count, individual fares, and city type.
* Matplotlib was used to represent the data by building bubble plots and pie charts to showcase the relationships between the key-variables.

**Weather Changes |** <https://github.com/GarimaChauhan16/WeatherPy>

* Analyzed changes in weather with respect to distance from the equator.
* Pulled data from OpenWeatherMap API to assemble a dataset on over 500 cities.
* Summary statistics and visualizations created using Python, Pandas, and Matplotlib.

**Chicago Housing Prices |** <https://github.com/GarimaChauhan16/Chicago-Housing-Prices>

* Explored the factors influencing housing prices in Chicago. The factors such as number of ammonites, crime rates, poverty, income, short term rentals like Airbnb etc.
* Pulled data from various sources like Kaggle, Zillow, US census website, Yelp.
* Plotted each factor against the median rental values to find out the correlation.
* Performed a multi linear regression analysis to find out how well the housing prices can be explained by each factor by calculating R-square value.

**Belly Button Biodiversity:** <https://github.com/GarimaChauhan16/Plotly--Belly_Button_Biodiversity>

<https://belly-button-biodiversity-g.herokuapp.com/>

* Built a Full-Stack application to build an interactive dashboard exploring the Belly Button Biodiversity Dataset using Plotly.js, Flask and Heroku.
* Using plotly built pie chart and bubble plot to showcase the sample values and labels.
* Built a gauge chart to plot a weekly washing frequency obtained from the samples.
* Using python flask deployed the app into Heroku.

**CTA Ridership Visualization:** <https://github.com/GarimaChauhan16/CTA-Ridership-Visualization>

* Built a web dashboard which shows a ridership trend for the Chicago Transit Authority (CTA) over the last ten years.
* The data was collected from Chicago Data Portal Website. <https://data.cityofchicago.org/>
* Used SQL database in Postgres to store the data and created a flask server to load the data into Python.
* Used html, D3, Javascript, Plotly and Leaflet to build final visualization dashboard.

**Experience**

**Mercedes Benz Research & Development, India                   2017-2019**

*Senior CAE Analyst*

* Design Validation, Failure simulation, Test Data correlation, Life cycle calculation for the transmission components of Mercedes Benz and AMG cars.
* Created and reviewed Analysis reports for the Computer Aided Simulation tasks and suggested design improvements.
* Created Design guidelines and Standard operating procedure documentation.
* Cross department collaboration with design, material, testing teams to resolve open field issues.

**Escorts Agri. Machinery, India                 2014-2017**

*Manager- Engineering Services*

* Design Validation, Failure simulation, Life cycle calculation for the tractor components.
* Collaborated with the testing team for the design validation and test correlation.
* Trained and mentored new hires with processes and tools.

**Mahindra & Mahindra Ltd., India                 2012-2014**

*Deputy Manager- Tractor CAE*

* Design Validation, Failure simulation, Life cycle calculation for the tractor components.
* Created load case documents for the test load conditions.
* Created design calculators for optimum component designs based on machine design process using Excel Solver Option.

**Education**

**Northwestern University, Chicago, Illinois**

*Data Science Bootcamp*

A 24-week intensive program focused on gaining technical programming skills in Excel, VBA, Python, R, JavaScript, SQL Databases, Tableau, Big Data, and Machine Learning.

**Indian Institute of Technology, Delhi, India**

*Master of Technology*

Design Engineering: Department of Applied Mechanics

**College of Technology, Pantnagar, India**

*Bachelor of Technology*

Mechanical Engineering