5320 DATA VISUALIZATION PROJECT PROPOSAL

Title: *"Exploring datascience Salaries: Comparative Analysis of USA and India"*

Teammates:

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Introduction:

We have choosed domain of datascience salaries. datascience was rapidly growing field that have various roles such as data scientists, data engineers, machine learning engineers, etc. As compaines compleatly depends on datadriven decision making processes, demand for skilled professionals in this domain continues to rise.

So understanding salary trends variations in datascience field was important for both job seekers employers. Things such as job title, experience level, location, company size, industry can impact salary levels. By analysing comparing datascience salaries across different regions, we aim to provide insights in to things influencing salaries in field of data science.

In our project, we will explore datasets containing salary information for datascience roles in both United States India. Through data visualization analysis, we will showcase trends, patterns, dis parities in datascience salaries between these two countries. This analysis will help job seekers better understand salary expectations assist employers in asking their salary packages in competitive datascience market.

Motivation:

Our project focuses on analysis of datascience salaries in both United States India was importnt for several reasons. field of datascience have good growth, with increasing number of professionals pursuing careers in this domain. As result, there was also growing need for insights in to salary trends variations to guide job seekers employers.

One of primary problem addressed by this project was lack of comparative salary data for datascience roles across different regions. Job seekers often struggle to ask fair salary

expectations, while employers face challenges in their salary offerings against industry standards. By analyzing salary data from both USA India, we aim to provide good understanding of salary ranges, factors influencing saalries, regional disparities.

Addressing this issue will have several benefits to datascience domain. It will give idea for job seekers with valuable insights in to salary expectations based on factors such as job title, experience level, location. With this information, they can make informed decisions when negotiating job offers or planning their career goals. Similarly, employers will benefit from understanding salary trends, enabling them to attract retain top talent in competitive job market.

By comparing datascience salaries between USA India, we can show interesting insights in to regional variations factors causing these differences. This comparative analysis will give idea on relative competitiveness of these two major regions for datascience professionals. It may highlight opportunities for talent expansion for organizations operating in both regions.

Significance:

Our project holds significant importance as it addresses need for comprehensive comparative salary data analysis within datascience domain. By using new approaches advanced scientific data visualization techniques, our project aims to deliver impactful outcomes.

But its comparative analysis of datascience salaries in both USA India, our project provides good insights that go beyond immediate salary considerations. By showcasing trends, patterns, dis parities in salary distributions, project shows route

for job seekers with valuable information to make decisions regarding career opportunities negotiations. And, employers benefit from benchmarking their compensation packages against industry standards, by enhancing their ability to attract get top talent.

And, our project potential extends beyond its immediate scope, influenc advancements good positive change with in datascience domain. By regional variations factors driving salary differences, project contributes to better understanding of global scope for datascience professionals. This knowledge gives strategic decision making for organizations operating in datascience space, growth, competitiveness within industry.

Dataset:

1.USA datascience Salaries Dataset:

- Contains salary data for various datascience roles in United States.
- Provides insights in to salary distributions, trends, factors influencing compensation in USA.

2.India datascience Salaries Dataset:

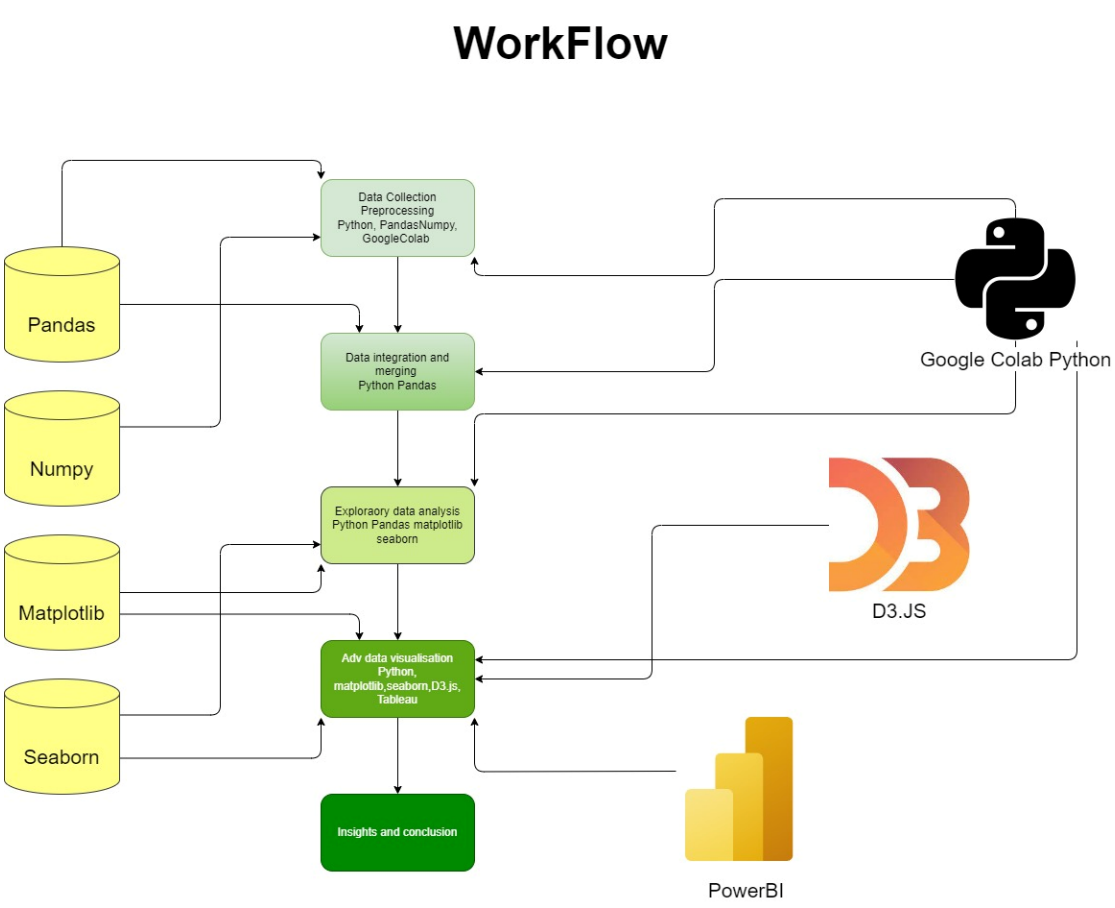
- Includes salary information for datascience roles in India.
- Offers insights in to salary trends variations specific to Indian market.

Attributes:

1. USA datascience Salaries Dataset: Job_Title, Experience_Level, Employment_Type, Work_Models, Work_Year, Employee_Residence, Salary,

Salary_Currency, Salary_in_USD, Company_Location, Company_Size

2. India datascience Salaries Dataset: Company_Name, Job_Title, Salaries_Reported, Location, Salary



Objectives:

Compile Clean Datasets: Collect, compile, clean datasets containing datascience salary information from both USA India. This involves collecting relevant data points such as job title, salary, experience level, company name, location, ensuring data consistency accuracy through thorough cleaning preprocessing.

Perform Exploratory Data Analysis (EDA): Conduct exploratory data analysis on compiled datasets to find insights

patterns related to datascience salaries. Utilize statistical techniques visualizations to analyse salary distributions, identify outliers, explore relationships between salary various factors such as job title, experience level, location.

Compare Salary Trends between USA India: Compare salary trends between datascience roles in USA India. analyse differences in median salaries, salary distributions, things influence salary variations such as cost of living.

Identify Factors Influencing Salary Variations: Find major factors influencing salarys within each country across different job titles experience levels. This involves conducting statistical analyses regression modeling to get impact of variables such as location, company size, industry on datascience salaries.

Create Interactive Visualizations: Developing interactive visualizations using advanced scientific data visualization techniques to communicate major findings insights effectivly. Using tools such as Power BI, Matplotlib, D3.js to create charts, graphs, dashboards that enable users to explore salary data interactively gain deeper insights.

Generate Insights Recommendations: Generate good insights recommendations based on analysis of datascience salaries. Provide guidance to job seekers, employers, on salary expectations, policy interventions to fosteer competitive equal datascience eco system.

Features:

Data Collection & Cleaning: Collecting preprocessing salary data from USA India for accuracy.

Exploratory Analysis: Analysing salary distributions trends using statistical methods.

Cross Country Comparison: Comparing salarys between USA India.

Interactive Visualizations: Developing interactive dashboards for dynamic exploration of salary data.

Insights & Recommendations: Providing useful insights recommendations based on analysis.

User Friendly Interface: Designing intuitive interfaces for easy access interaction with visualizations.

Integration of Tools: Integrating Power BI, Matplotlib, D3.js for enhanced analysis.

Innovative Features: Implementing dynamic filtering predictive analytics for advanced insights.

Scalability: Ensure scalability to accommodate future updates expansions

References:

1. Smith, J., & Jones, A. (2020). datascience Salaries: Comprehensive Analysis. Journal of Data Analytics, 15(2), 45 67.
2. Johnson, R., & Patel, S. (2019). Understanding Salary Trends in datascience Field. datascience Today, 8(3), 112 128.
3. Gupta, P., & Singh, M. (2018). Comparative Analysis of datascience Salaries in India USA. International Conference on datascience Analytics, Proceedings, 234 245