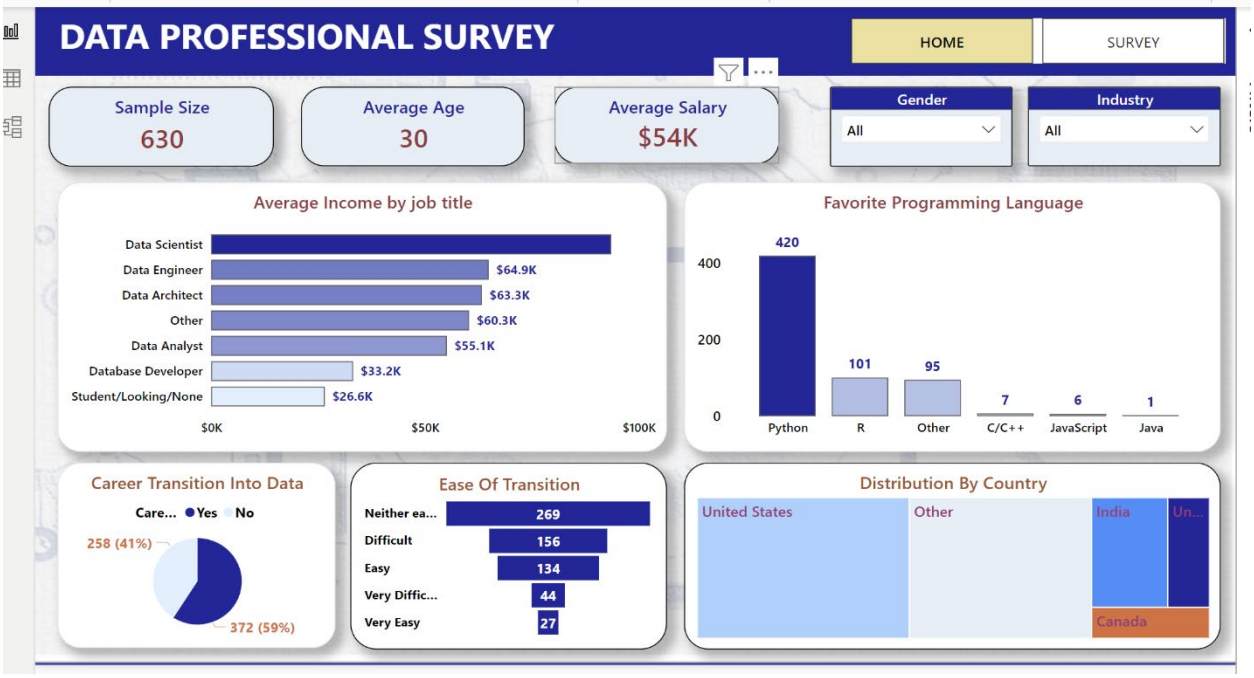
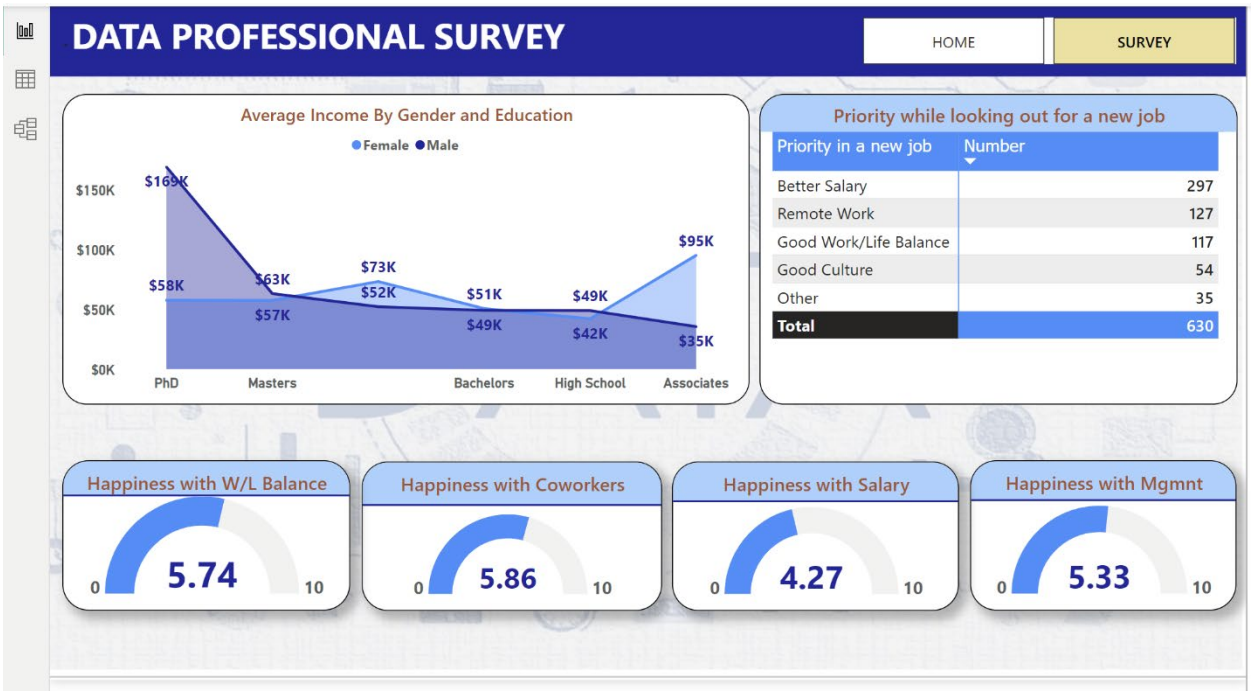
Date 12/20/2023





Overview:

With an evolution in understanding the importance of data science and its related domains, it is imperative to conduct a study on data-related roles to generate key insights. Alex Freberg conducted this Data Professional Survey, across a diverse geographic range including many countries. The survey included a piece of broad information including, education, preferred programming languages, gender, and certain questions determining the satisfaction of data professionals with their current roles. Using this information, an interactive report was created by me using Power BI to visualize the key findings.

Original Data Source: https://github.com/AlexTheAnalyst/Power-BI/blob/main/Power%20BI%20-%20Final%20Project.xlsx

Skills Used:

1. **Data cleaning and preparation using Power Query.**

- Review of the dataset for datatype in each field, presence of null values, and understanding which fields are crucial to answer the study's objectives and which are not.
- Data standardization in the columns “Job Title”, “Favorite programming language”, and “Current yearly salary”, “Which country do you live in” to make the data consistent for visualization purposes.
- Calculated a custom column named “Average income” from the “Current salary column” as the salary was provided in a range instead of a specific value.

2. **Data Visualization:**

The Power BI report includes:

- Cards to provide a glimpse of demographics in a summary.
- Bar charts to visualize the distribution of income across different data roles.
- Area chart to visualize the distribution of income by education and gender.
- Column chart to visualize the preference for programming languages.
- Donut chart to visualize the count of career transitions into the Data field.
- Gauge charts to display the satisfaction level of data professionals with Work-life balance, Salary, management, and new learning opportunities.
- A funnel chart to describe the ease of transition into data roles.

3. **Summary:**

The report helped to deliver the key insights and interesting facts as below:

- The average age of data professionals across different geographical locations stands at 30.
- The Average income in data roles across all locations, irrespective of job titles is $54K. However, a broad range in Average income can be observed, ranging from a minimum of 27k to 93.5K.

- Among all the Data roles observed in the survey, “Data Scientists” emerged as the most-paid job title with an average of $93.5K.
- The highest salaries in data-related positions are typically earned by individuals with a Ph.D., surpassing compensation levels for those with alternative educational backgrounds.
- In terms of gender, the average income in data roles is consistent. The average income of Women in data roles is 55K and for Men, the average income is 53K.
- However, when the comparison of average income between genders was done including education, one interesting fact was observed. The average income in Males with a Ph.D. degree is 169K whereas for women with the same education, it was around 76K. This variance could be possible because of difference in professional experience or currency variation between Countries.
- Python outshined all the other programming languages with 420 votes. Java emerged as the least preferred language for data-related roles.
- Out of the 630 samples studied, 59% have made a transition into data roles from a different background and 41% started their career with data roles.
- 42.6% of the sample size indicated that their transition into data roles was neither easy nor difficult, whereas 24.7% admitted the transition was difficult.
- With an average score of 4.27 out of 10, it would not be wrong to say that Data professionals are not content with their salaries. Similarly, with a moderate score of 5.74, another area that companies can improve is by providing a suitable Work-Life balance environment.
- Data professionals seem to be more content when it comes to relations with peers (score 5.8/10) and management (score 5.3/ 10) as compared to satisfaction with salary.
- This also explains why “better salary” topped as the answer to the survey question “most important thing hunting for a new data-role”. The opportunity of remote work stood at second position with 127 votes.