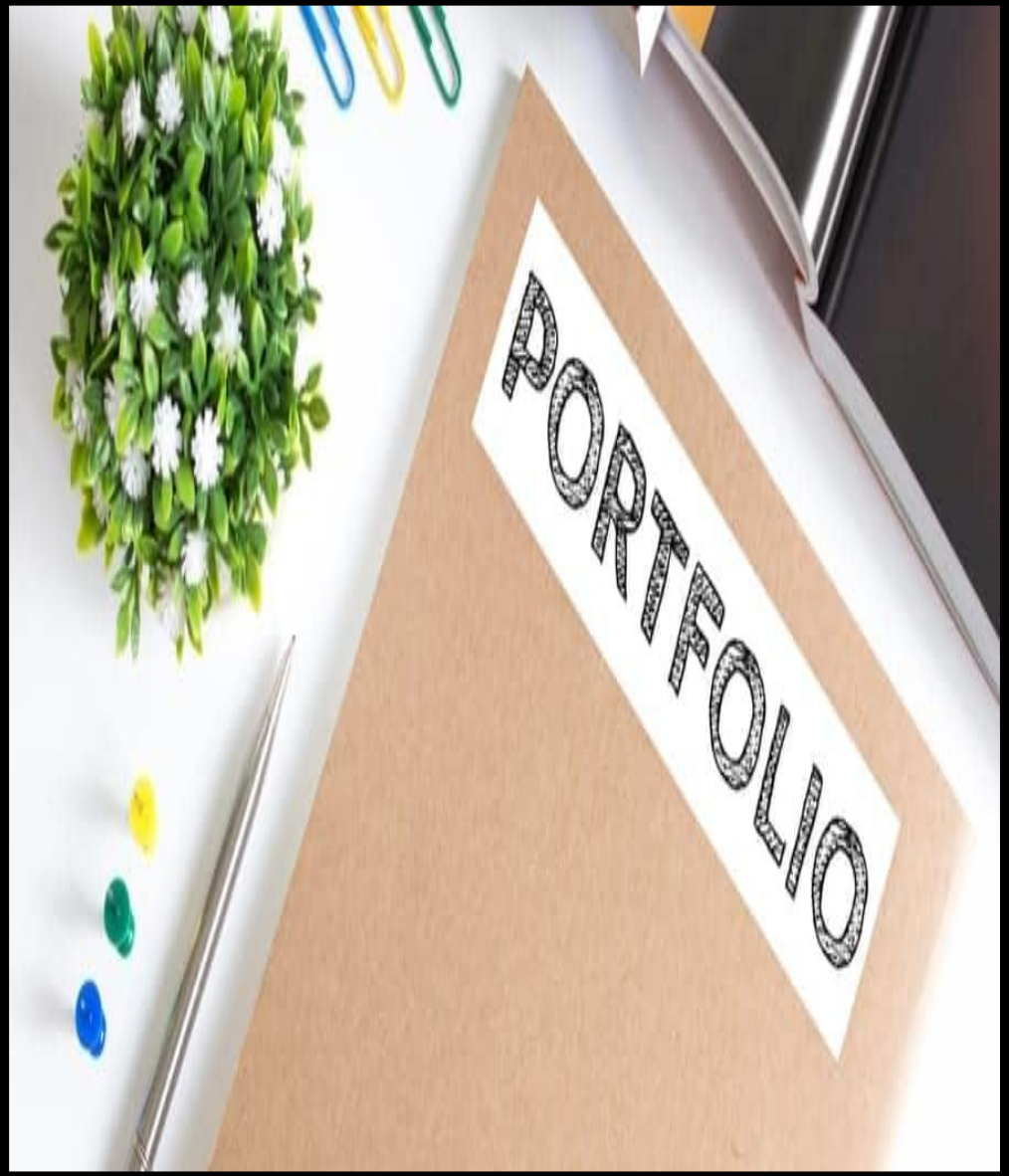
DATA ANALYSIS 2023



PROFESSIONAL BACKGROUND

I am an entry-level software engineer with expertise in data capturing and interpretation, I possess a bachelor's degree in business information technology with a strong educational background in computer science and experience based on projects in Java, SQL, HTML, CSS, Python, C# and JavaScript. I am skilled in problem solving, critical thinking, effective communicator in team environments and I am committed to continuous learning and excited to work on different projects to develop my skills and be a proficient data analysist.

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Udemy Data Analysis

PROJECT DESCRIPTION

- To better understand the pricing and subscriptions data of Udemy courses (for four different subjects) and identifying trends and patterns

- This will help us to:

- Identify for which subject more courses should be created
- Create targeted strategies to increase the company revenue

DATA DESIGN

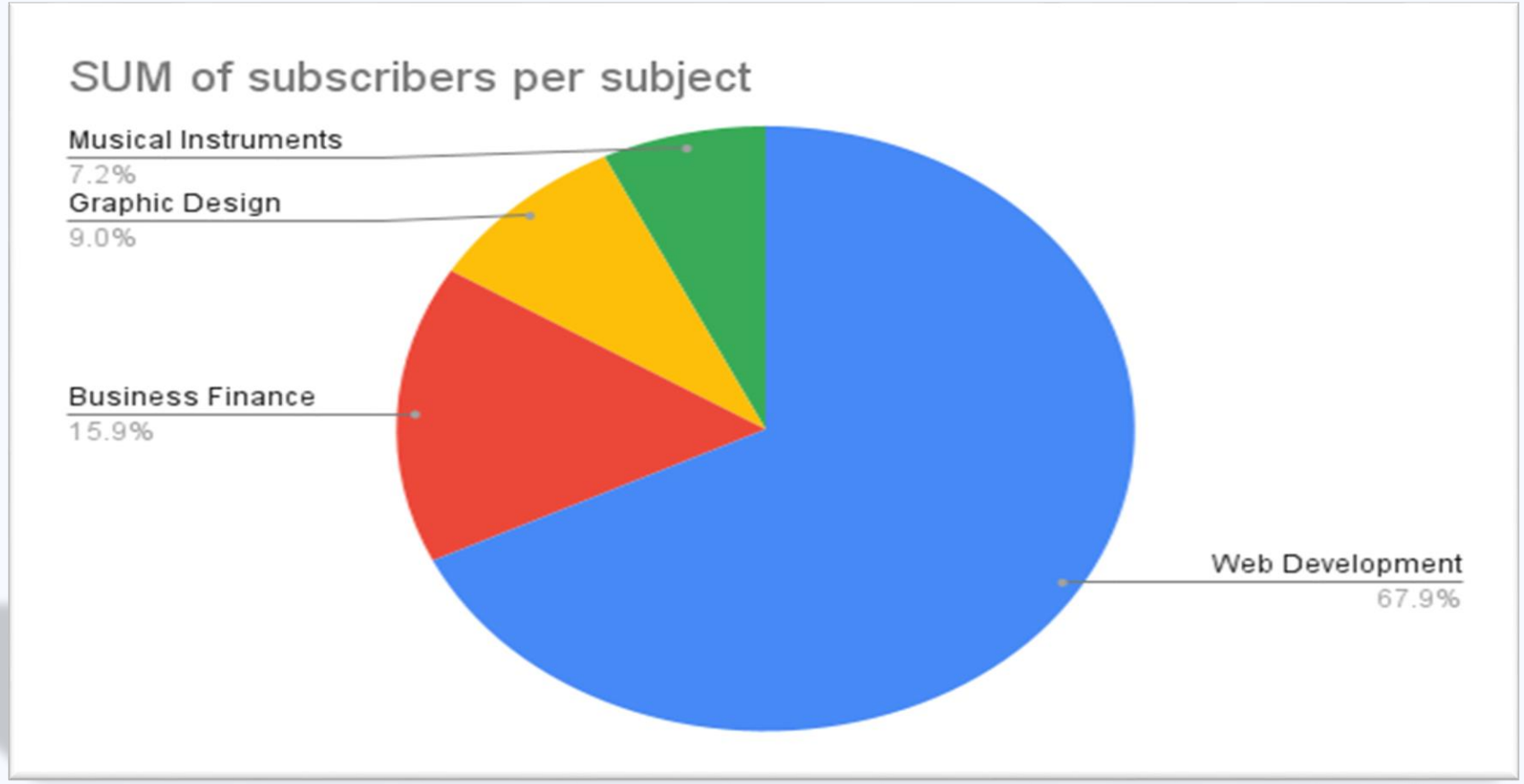
The Udemy data set was cleaned with google sheets to delete incomplete data and duplicates. Google sheets and Tableau were used to provide proficient visualization for story telling, combined with a couple of analytical tools such as pivot tables, IF and VLOOKUP functions.

KEY QUESTIONS

1. What are the total numbers of subscribers in each subject?
2. How does the average content duration/price/number of students vary across different subjects?
3. How many courses are free and paid for each subject?
4. What is the average price of web development courses at different levels?
5. What are the 20 most popular courses? Also, include the following information:
   - Their level
   - Whether they are free or paid
   - Whether any are free beginner courses,
   - and the duration of the courses.
6. Does content duration impact the price of the course?

Findings & Insights

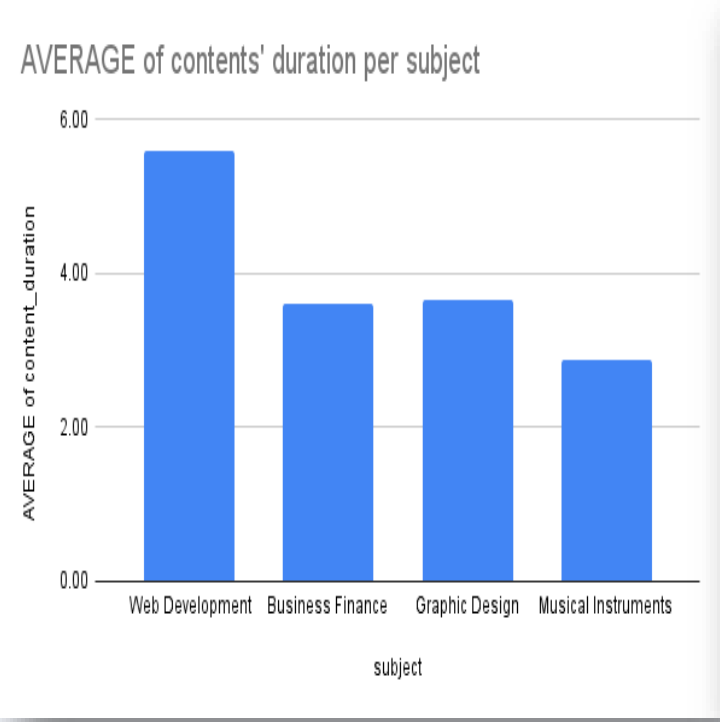
1. WHAT ARE THE TOTAL NUMBERS OF SUBSCRIBERS IN EACH SUBJECT?

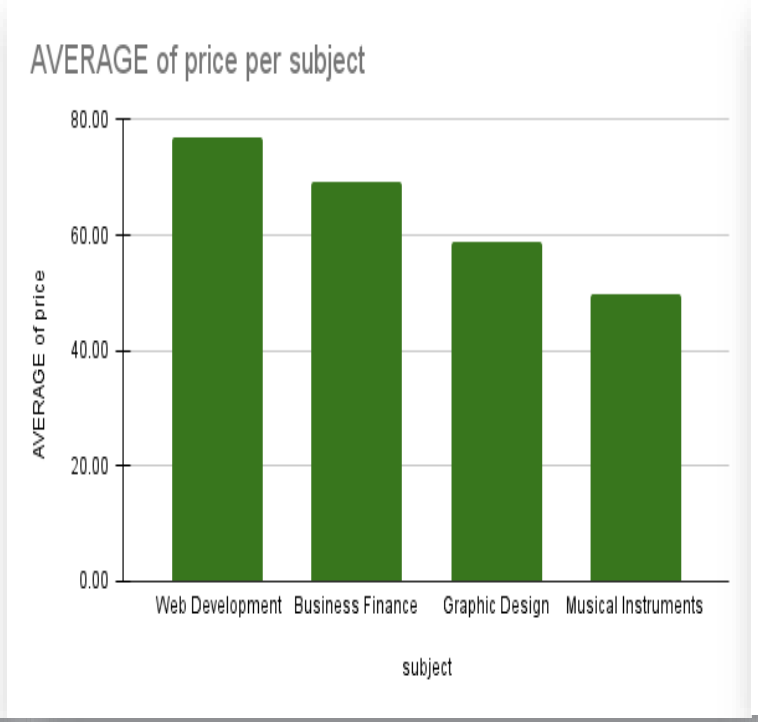


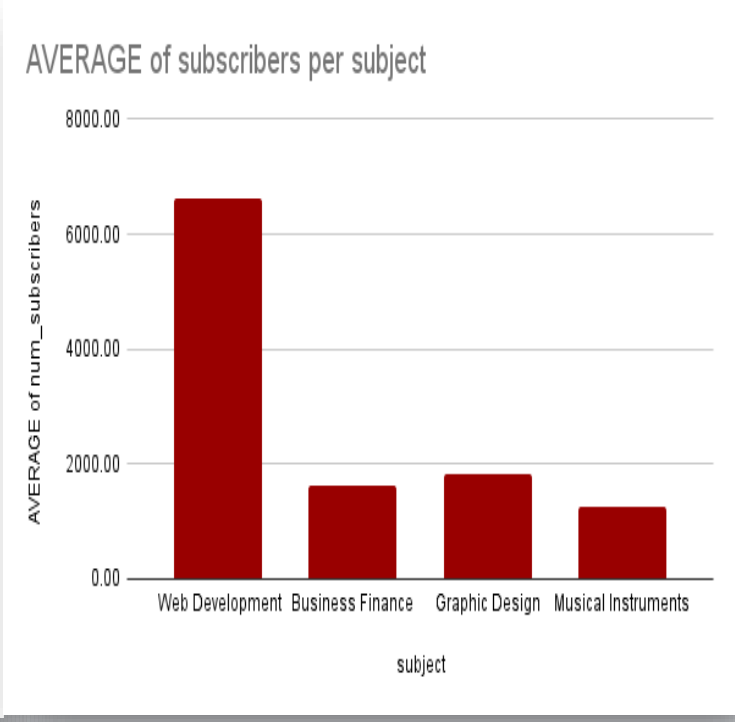
BRIEF SUMMARY

- The most popular subject in Udemy is web development and it represents 67.9% of the total subscribers.

2. HOW DOES THE AVERAGE CONTENT DURATION/PRICE/NUMBER OF STUDENTS VARY ACROSS DIFFERENT SUBJECTS?







BRIEF SUMMARY

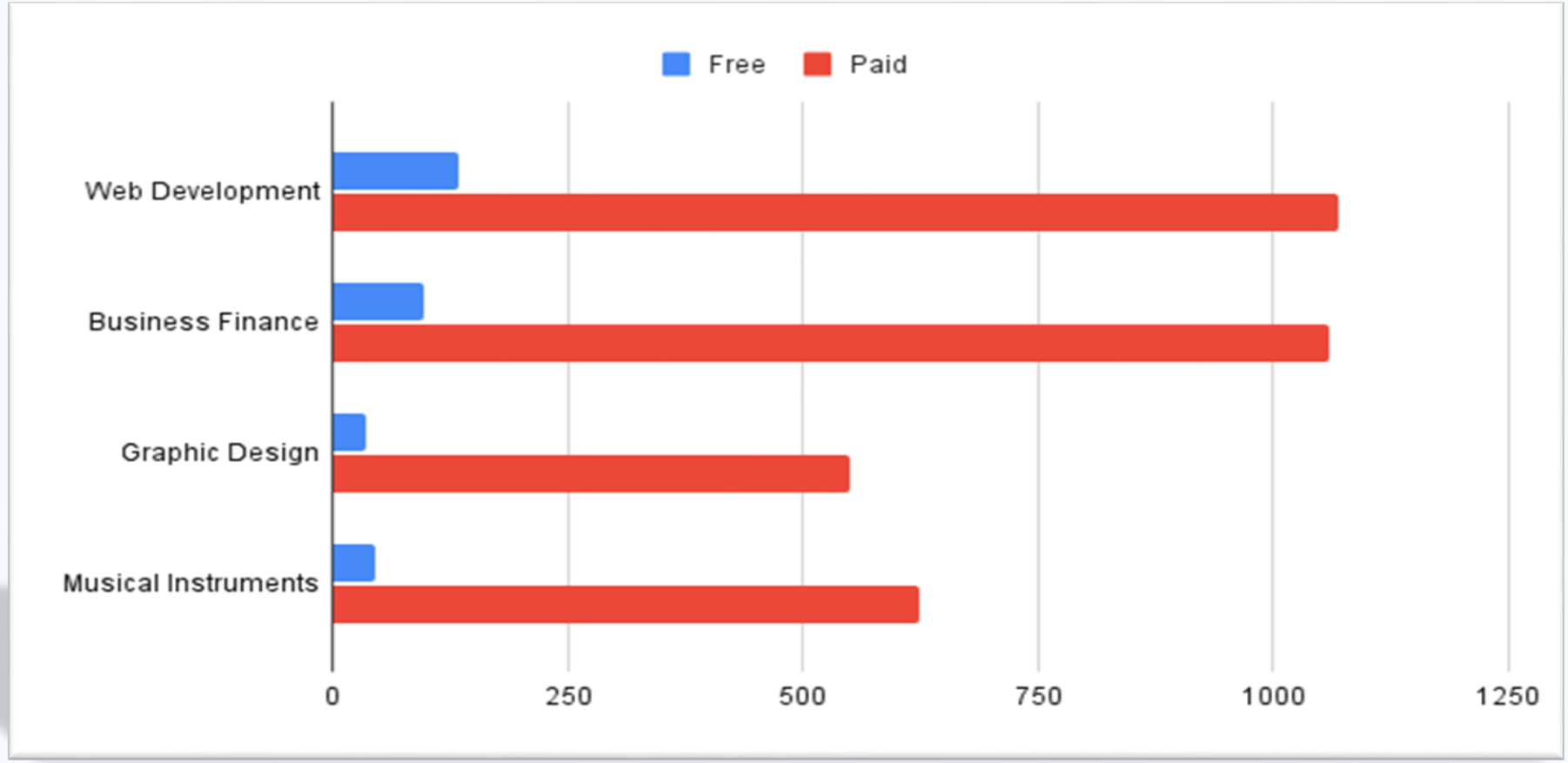
- By looking at the column chart for the average content duration, price and subscribers per subject we have a clear insight of the average price, content duration and also the number of subscribers, are the highest for web development.

- In the average content duration per subject the graphic design takes the second place after web development, while business finance comes at the third place and musical instrument comes last.

- By observing the average of price per subject, business finance is the second with an average price of 69.08, graphic design is the third (58.77) and Musical instruments is the last (49.65).

- By observing the average of subscribers column graph, we notice that the web development subject has a massive amount of subscribers (6635.02 subscribers) compared to the other subjects, while respectively graphic design has an average of 1617.93 subscribers, followed by business finance which has 1617.93 subscribers and musical instruments subject which has 1265.60 subscribers.

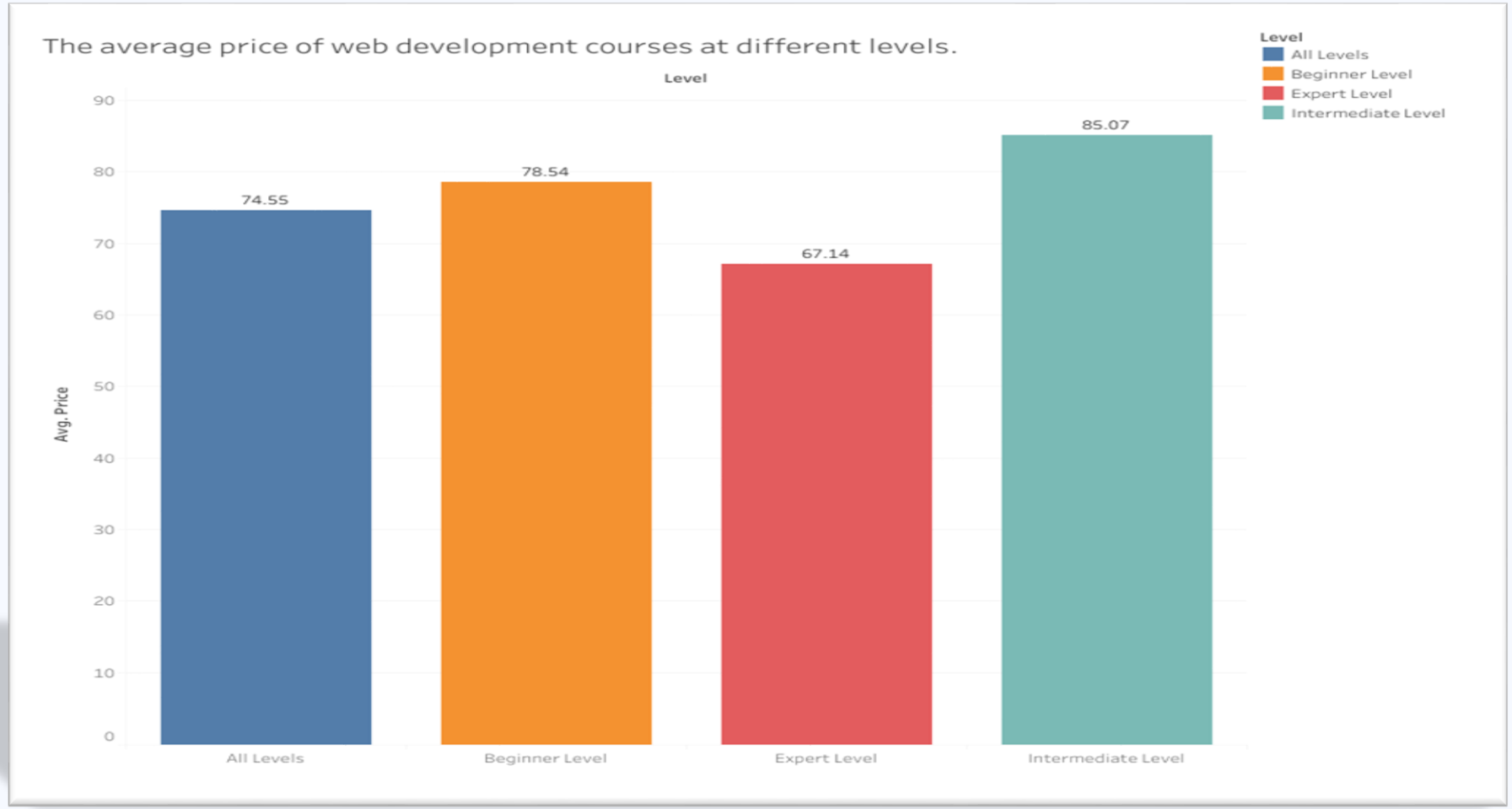
3. HOW MANY COURSES ARE FREE AND PAID FOR EACH SUBJECT?



BRIEF SUMMARY

- Web development and business finance have more courses which are free and paid than the rest.
- Web development has a total of 1203 courses which 134 are free and 1069 are paid courses.
- Business finance has a total 1155 courses which 96 are free and 1059 are paid courses.
- Graphic design has a total of 584 courses which 549 are paid courses and 35 are free courses.
- Musical instruments has 669 courses in total, made of 46 free courses and 623 paid courses.
- Web development and business finance's courses represent almost 60% of the all courses combined in the database.

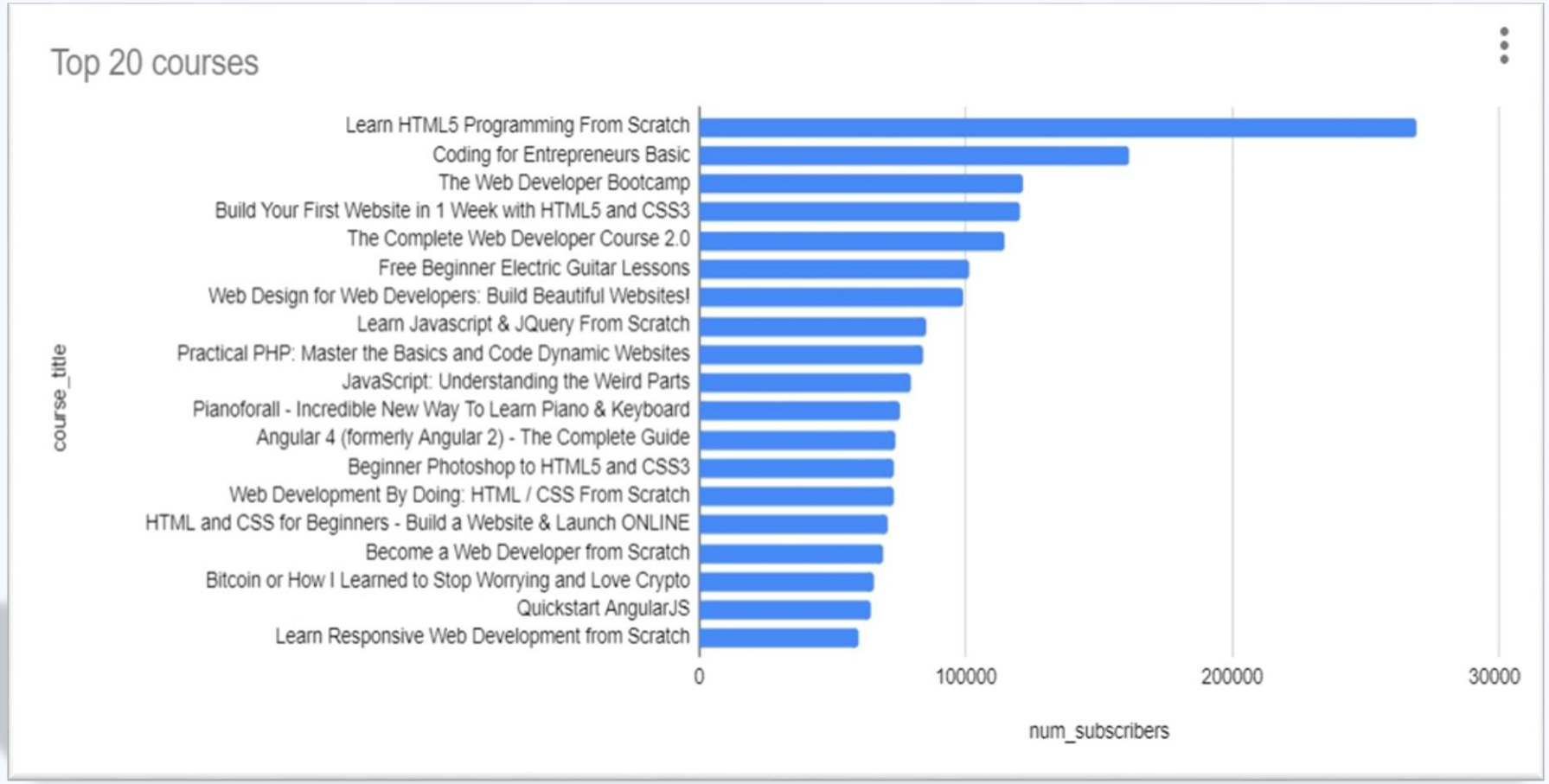
4. WHAT IS THE AVERAGE PRICE OF WEB DEVELOPMENT COURSES AT DIFFERENT LEVELS?



BRIEF SUMMARY

- The intermediate level has a higher average price of 85.07USD , followed by the beginner level with an average price of 78.54USD, followed by all level and expert level with an average price of 74.55USD and 67.14USD.

5. WHAT ARE THE 20 MOST POPULAR COURSES?



BRIEF SUMMARY

- According to chart we can notice that the course title “Learn HTML5 programming from scratch” is the most popular based on the number of 268923 subscribers, followed by “Coding for Entrepreneurs Basic” with 161029 subscribers and the list goes on until the twentieth course “Learn Responsive Web Development from Scratch”.

6. DOES CONTENT DURATION IMPACT THE PRICE OF THE COURSE?

BRIEF SUMMARY

- According to the graph we can notice that most of the courses have a content duration of 20 hours or less, and a few courses have more than 40 hours of content duration.
- The content duration is not affected by the price because we notice there is a course that has a length of 76.50 hours and its price is 200USD at the same time there is also a course that has a length of 78.50 hours and its price is 50USD, from these facts we can deduct that the price is not affected by the length of content duration.

Summary

SUMMARY OF FINDINGS:

- ***Top 5 courses:***
    - *Almost 68% of subscribers come from Web Development and the top 5 courses are for Web development as well*
- ***Business Finance vs Web Development:***
    - *Business Finance and web development have almost equal number of total courses (1155 vs 1203), but web development course are almost 2x in content duration and have 4x the average subscribers*
- ***Course Pricing:***
    - *The course subscription does not seem to be impacted by the price because web development courses have the highest number of subscribers while having the highest price at the same time.*

Actions & Recommendations

RECOMMENDED ACTIONS

Product recommendations:

- *Focus on getting more paid course by creators in web development field hence this is the most popular subject in udemy.*

Marketing recommendations:

- *Our data tells us that our web development courses are most popular and people are willing to pay for it. Marketing and advertising campaigns should therefore focus on advertising more web development contents.*

Data Scientist Salary

PROJECT DESCRIPTION

As an IT graduate, I am very fascinated by the huge impact of data science on businesses and how data analysis allows companies to be efficient in marketing and decision making. Data science has become so important that many companies are willing to invest a huge amount of money, which at the same time attracted by curiosity to find out how good is the salary for anyone who wishes to start a data science career mostly based in the USA, Canada and UK.

To do so, this project will be focusing on understanding the salary of data scientists' based on their fields, locations and expertise.

This will help us to:

- Identify which job title in data science has the highest salary.
- Which country has the highest and lowest salary.

DATA DESIGN

To conduct my analysis, I cleaned the original data set downloaded from kaggle to remove blanks, duplicates, incomplete and irrelevant data.

The dataset was analysed and structured by using Google sheets and Tableau was used for visualisation, combined with a couple of analytical tools such as formulas, pivot tables, IF and VLOOKUP functions in order to answer key questions and come up with a conclusion and action recommended according to the findings which will be discussed on the following slides.

KEY QUESTIONS

1. What is the average salary on different company size based on expertise for 2022?
2. What is the average salary on different country based on expertise for 2020 to 2023?
3. Is there any changes in data scientists' salary throughout 2022 and 2023?
4. What is the highest salary for a data scientist?
5. What is the lowest salary for a data scientist ?
6. Which country has the highest salary in 2023?
7. What is the most popular data scientist job title in USA, UK And Canada in 2023?
8. Does the company size affect the salary?

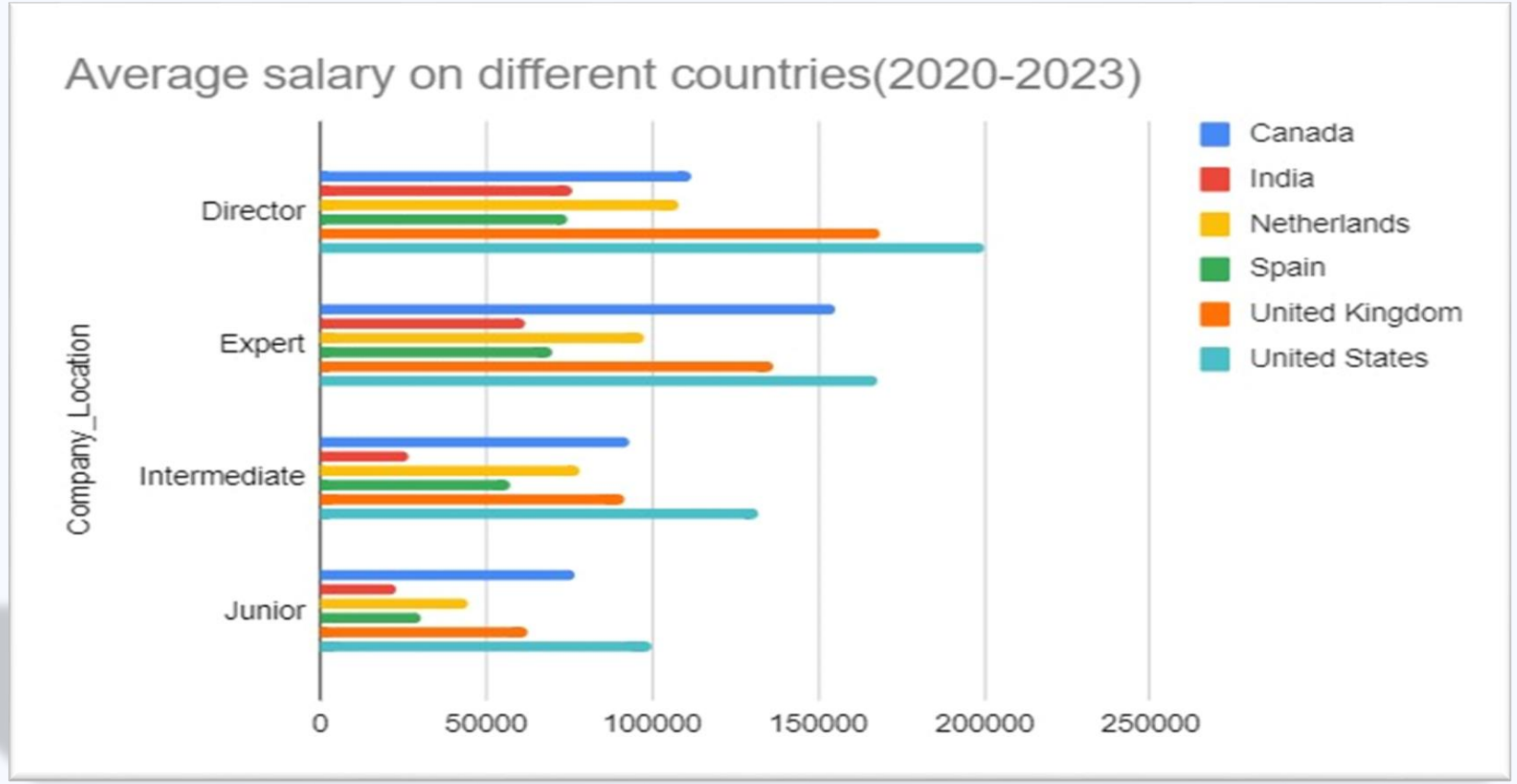
FINDINGS AND INSIGHTS

1. WHAT IS THE AVERAGE SALARY ON DIFFERENT COMPANY SIZE BASED ON EXPERTISE FOR 2022?

BRIEF SUMMARY

- The average salary for directors is the highest in a small and medium company size.
- The average salary for experts is the highest within a large company in 2022.
- The average salary for intermediate is slightly higher in the a large company size.

2. WHAT IS THE AVERAGE SALARY ON DIFFERENT COUNTRY BASED ON EXPERTISE FOR 2020 TO 2023?



BRIEF SUMMARY

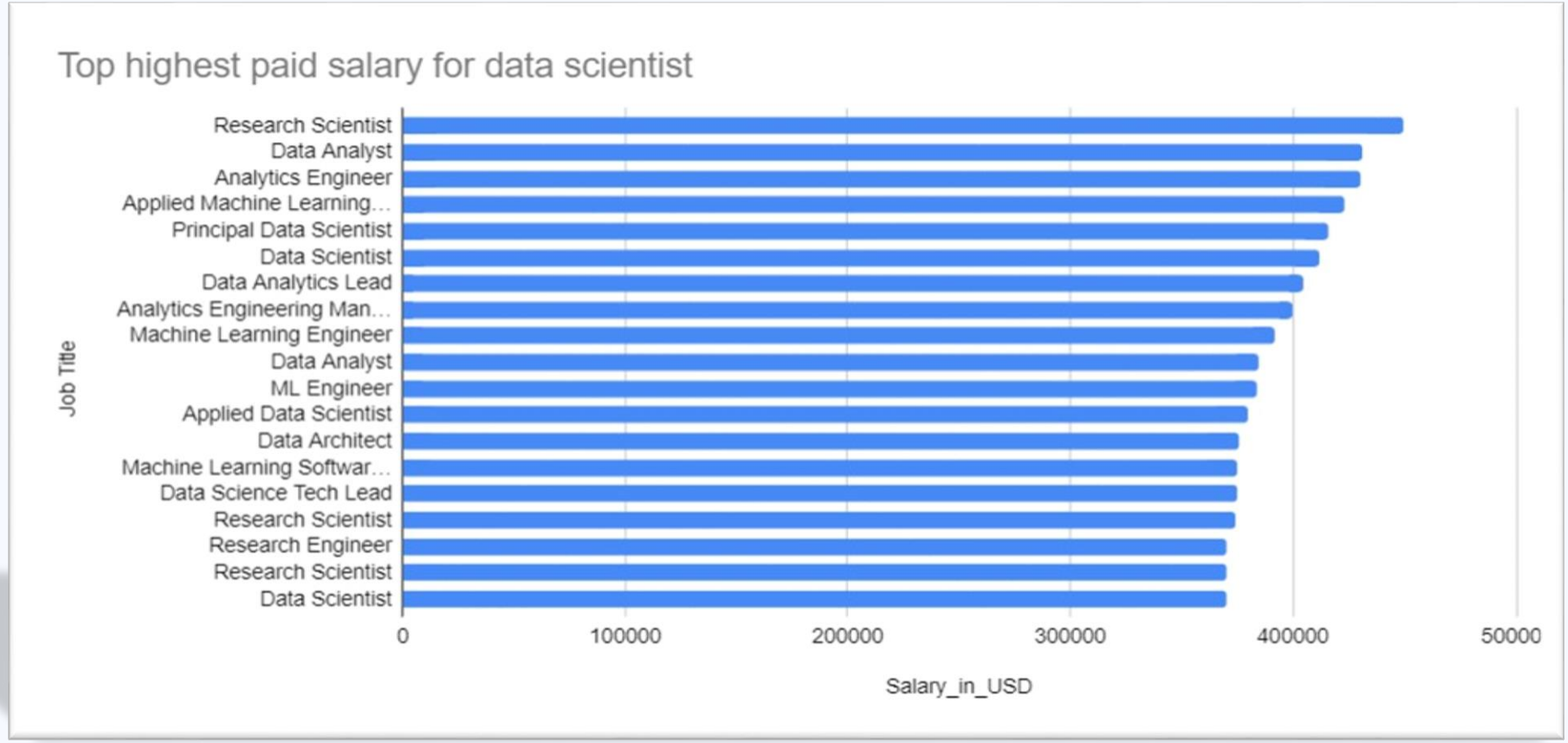
- The average salary for directors, experts, intermediate and junior is the highest in the united states.
- The average salary for experts in Canada is 154890$ which comes right after the average salary for experts in the united states.
- In the UK, the average salary for directors, intermediates and juniors come after the unite states' average.

4. IS THERE ANY CHANGES IN DATA SCIENTISTS' SALARY THROUGHOUT 2022 AND 2023?

BRIEF SUMMARY

- In 2023, the average salary for the directors within large companies has significantly increased and it has decreased in medium size companies compared to 2022.
- The director's salary is absent within small companies in 2023.
- The experts' average salary has increased within large and medium company and it has decreased within small company in 2023.
- The average salary for intermediate has increased within small company and it has decreased within large company.

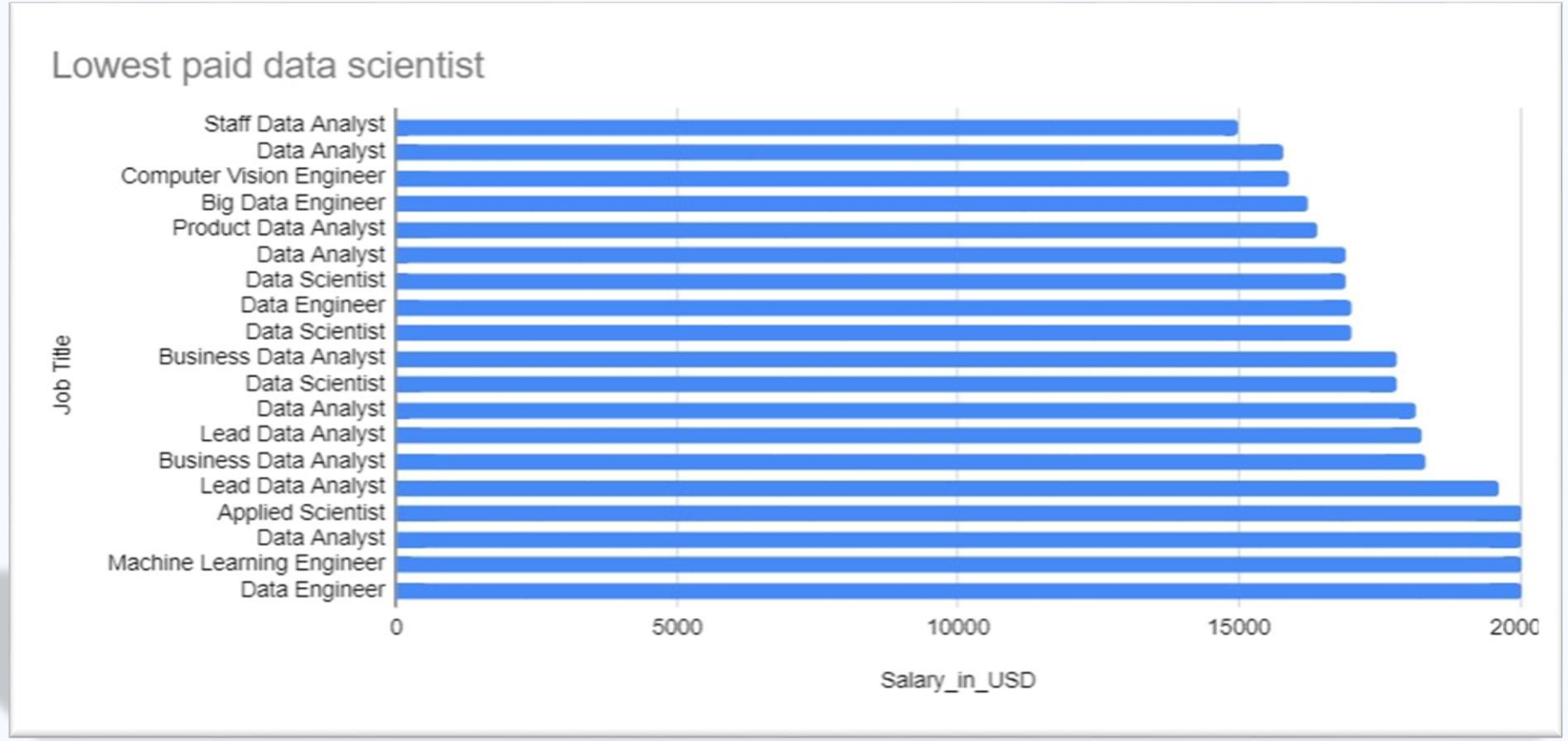
4. WHAT IS THE HIGHEST SALARY FOR A DATA SCIENTIST?



BRIEF SUMMARY

- The highest paid salary for a data scientist(research scientist) in the dataset collected is precisely 450000$ per year, followed by data analyst with a salary of 430967$ per year.

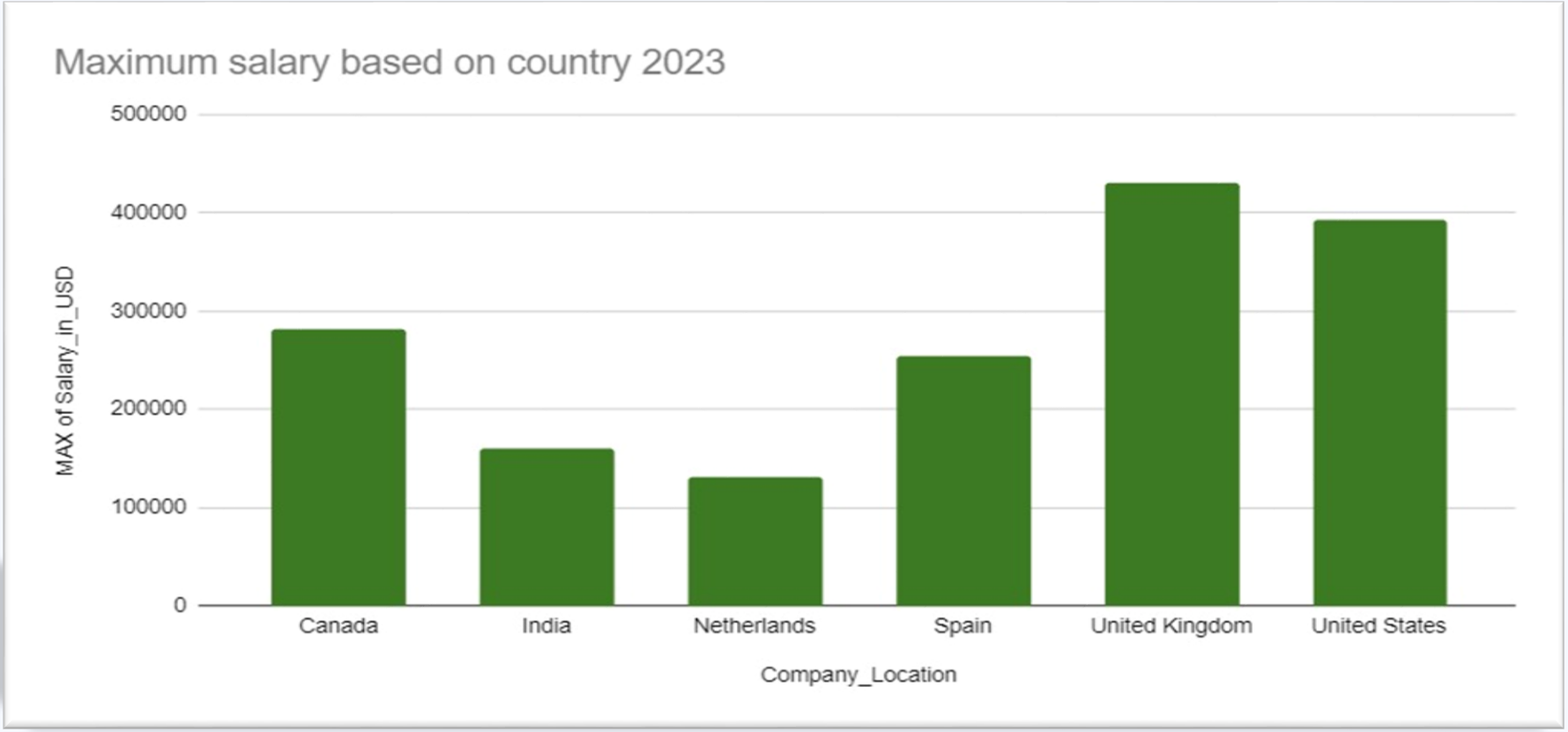
5. WHAT IS THE LOWEST SALARY FOR A DATA SCIENTIST ?



BRIEF SUMMARY

- The lowest paid for a data scientist is 15000$ per year as a staff data analyst.

6. WHICH COUNTRY HAS THE HIGHEST SALARY IN 2023?



BRIEF SUMMARY

- United kingdom is the country that has the highest salary of 430640$ per year in 2023, followed by the united state with a salary of 392000$ per year and Canada which has a highest salary of 281000$ per year.

7. WHAT IS THE MOST POPULAR DATA SCIENTIST JOB TITLE IN USA, UK AND CANADA IN 2023?

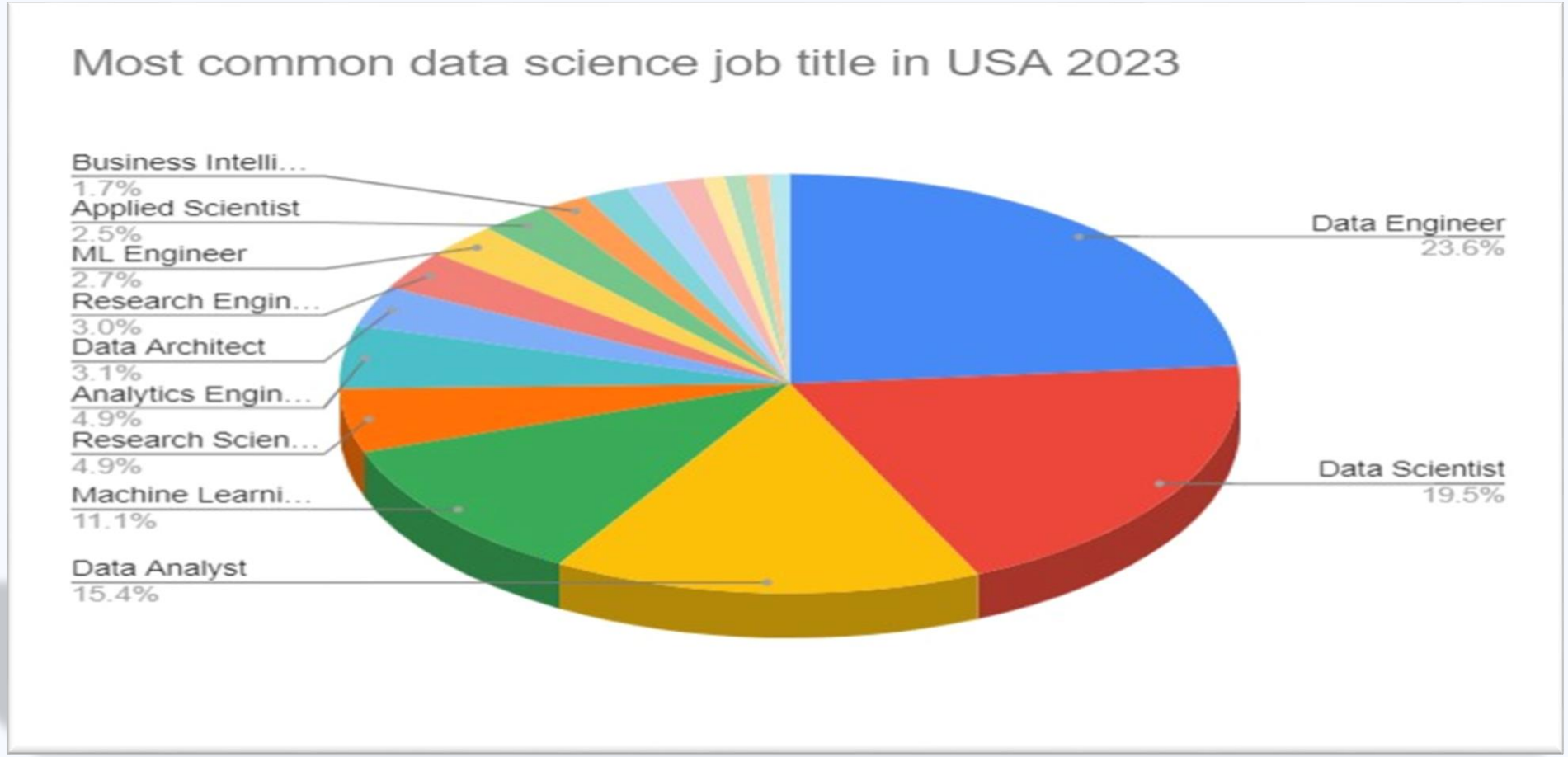


CHART FOR UK

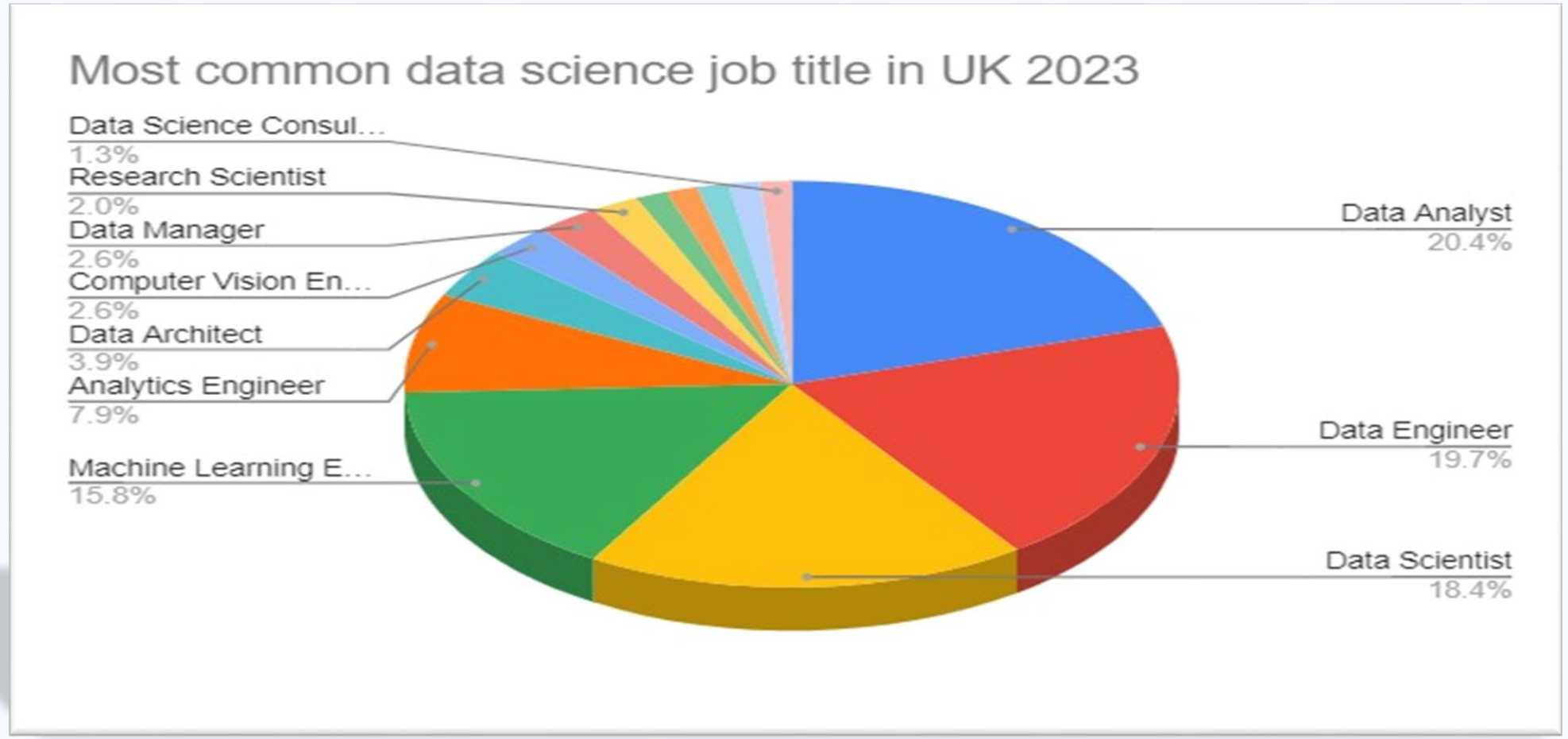
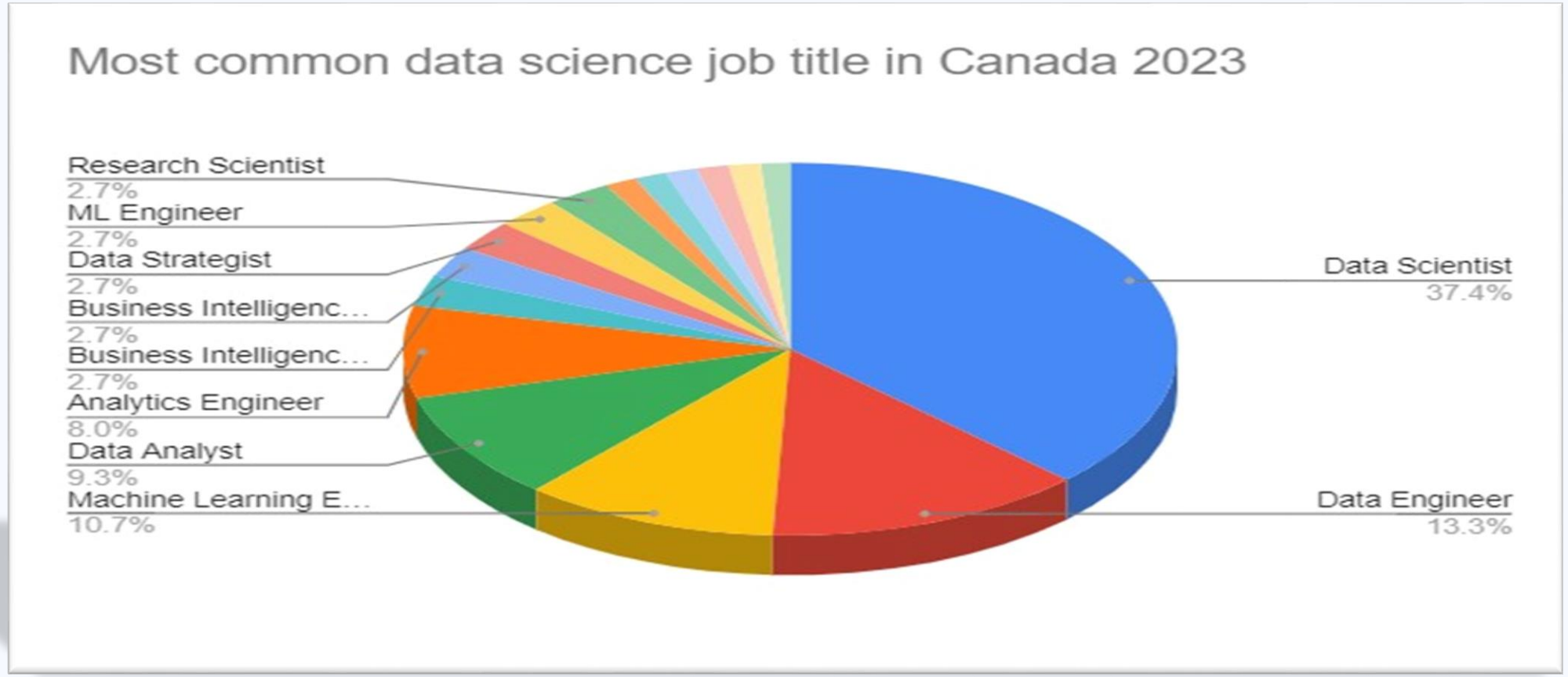

Most common data science job title in UK 2023
Data Science Consul...
1.3%
Research Scientist
2.0%
Data Manager
2.6%
Computer Vision En...
2.6%
Data Architect
3.9%
Analytics Engineer
7.9%
Machine Learning E...
15.8%
Data Analyst
20.4%
Data Engineer
19.7%
Data Scientist
18.4%

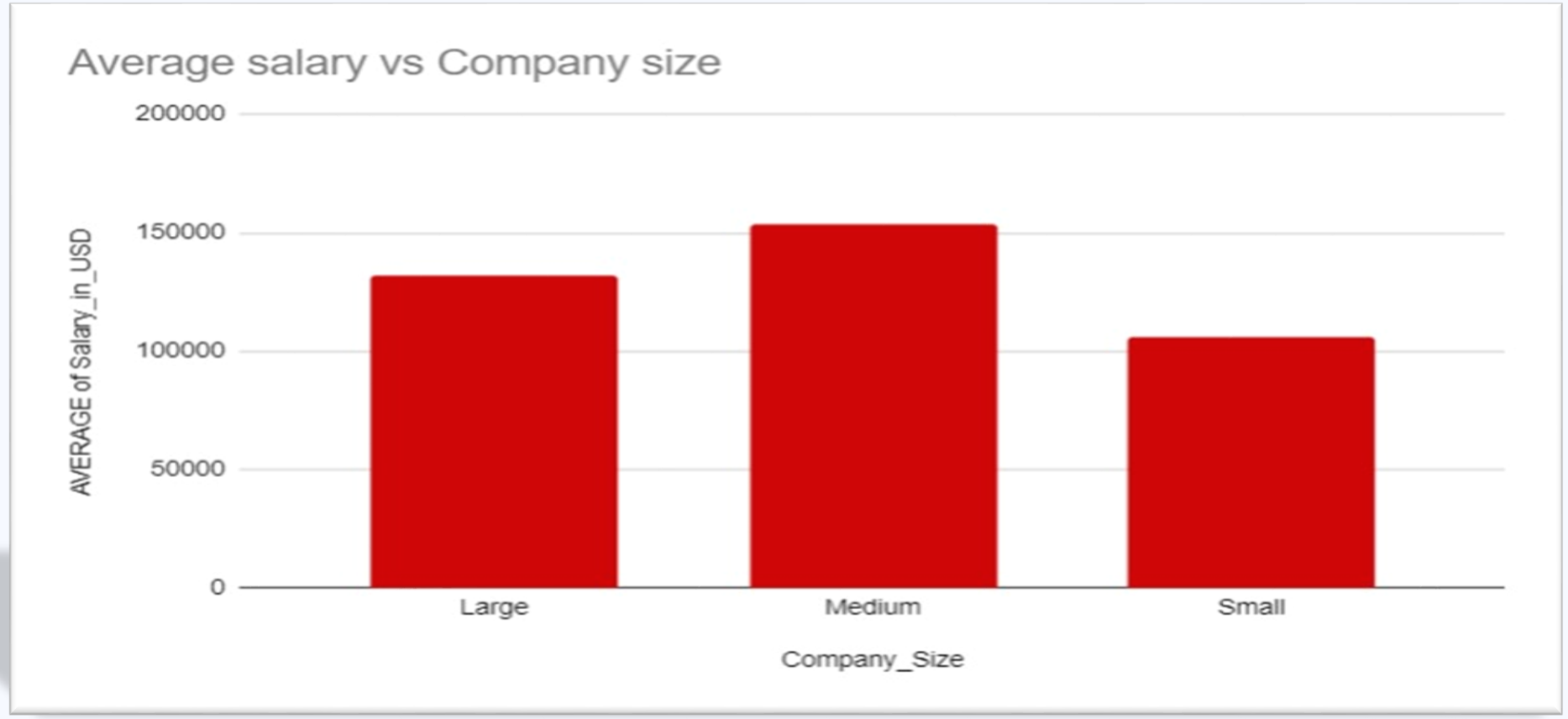
CHART FOR CANADA



BRIEF SUMMARY

- In the USA, the most common job title is data engineer which consists of approximately 24% of the total job title.
- In the UK, the most common job title is data analyst which consists of 20,4% of the total job title.
- In Canada, the most common job title is data scientist which consists of approximately 37% of the total job title in 2023.

8. DOES THE COMPANY SIZE AFFECT THE SALARY?



BRIEF SUMMARY

- The medium size companies appear to offer a higher salary than large and small companies size.

SUMMARY

SUMMARY OF FINDINGS

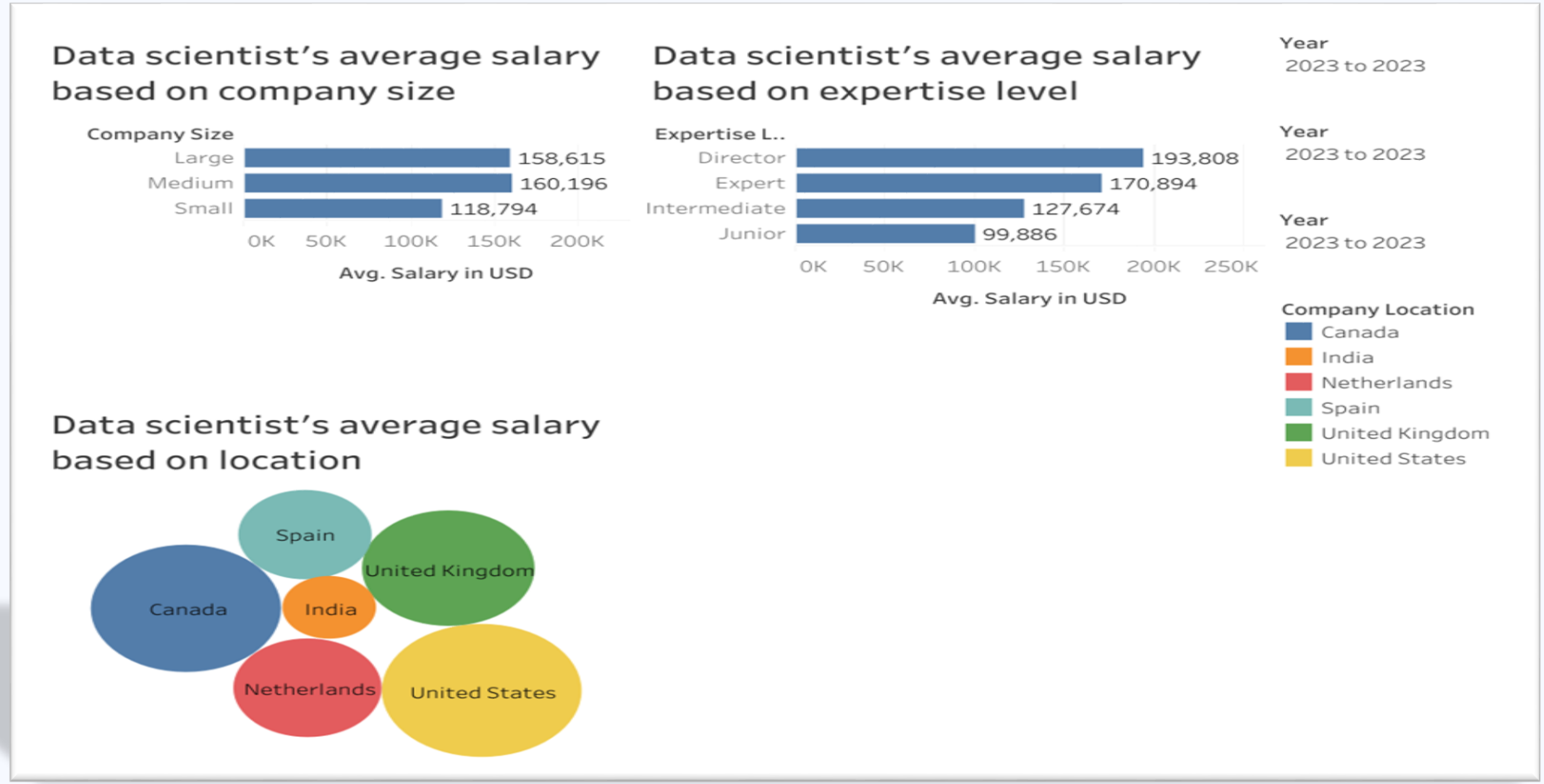
- **Top countries that have high salary for data science:**
  - In conclusion, the united states have the highest average salary pay rate, followed by the united kingdom and Canada.

- **Data scientist's salary:**
  - As a director or expert data scientist, the salary can get up to 450000$ per year. This can mostly happen when working within in large and medium company size in the United States..

- **Data scientist's most common job title:**
  - After analysing the most common job title in USA, UK and Canada, we have a clear understanding that data engineer, data scientist and data analyst are the most repetitive common job title in the data science career.

ACTIONS AND RECOMMENDATIONS

DATA SCIENTIST'S SALARY CHART (TABLEAU)



RECOMMENDED ACTIONS:

- Our data tells us that anyone who wishes to start a career in data science and look forward to maximise his or her chance to obtain a good salary as possible, it is recommended to achieve an experts level of experience and get a job in a medium size company within the united states followed by United Kingdom and Canada.

THANK YOU