**Introduction to Data Science**

**Mock Assessment Excel file starter (Week -3/4)**

**Documentation (what I did to accomplish each Task)**

**Task 1-**

a) Created a table from the dataset and deleted the columns Currency and Business Area.

b)      Two of the columns Amount Applied and Loan Accepted formatted as Currency with 2 decimal places.

***NOTE:***

1. [For creating table, first I selected the entire dataset by clicking on ctrl + A. Then I clicked on the column header and went to insert and then in table option and clicked there. It started showing a filter arrow with my column headers and while clicking on this filter arrow it shows many filter options that makes sorting and filtering easier.]
2. I made the heading row freeze by clicking on row 2 (left hand side) and then clicked on view on the ribbon and selected freeze pane.

**Task 2-**

a) There are some missing values in the Business Name Column. Find the missing cells and delete those rows.

b)      Sort the data in the Loans Accepted column from Highest to Lowest. On your Word document create a table and Highest Loan and Lowest Loan amount

c)       Use SUM AVERAGE and COUNT to answer these questions about the ‘Loans Accepted’--

a.       What is the total value of loans accepted?

b.       What is the average loan accepted?

c.       What is the total number of loans accepted?

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **LOAN ACCEPTED** | | | | |
|  | | | | |
| Highest Loan | Lowest Loan | Sum | Average | Count |
|  |  |  |  |  |
| £9,497.92 | £4,500.94 | £6,914,302.40 | £6,998.28 | 988 |
|  |  |  |  |  |
|  |  |  |  |  |

***NOTE:***

## To remove missing values in Business Names column I clicked on filter arrow in Business Name column, in the filter options, I deselected all checkboxes except for the "Blanks" checkbox. This will filter our data to show only rows with missing cells in the selected column(s).

Now I selected all the cells with missing rows and deleted them by clicking right click and then ‘Delete’.

## Now total rows left as 989 rather than 1000.

## I have sorted the Loan Accepted column as Highest to Lowest using filter arrow.

## Now I will create table for Highest and Lowest loan amount using Insert tab from ribbon and then selecting the table option.

1. I used sum, average and count to give answer to the questions.

**Task 3-**

Create this table on your Word document and using either filtering or SUMIF to complete the Amount Applied and Loan Awarded columns. Use the appropriate calculation to complete the Percentage of Loan Awarded column.

a)       Create an appropriate visualisation to compare the total applied for and awarded from the different bank.

|  |  |  |  |
| --- | --- | --- | --- |
| **Bank** | **Amount Applied** | **Loan Awarded** | **Percentage of Loan Awarded** |
| **NatWest** | £1,423,864.16 | £1,364,574.40 | **95.84%** |
| **RBS** | £1,466,309.07 | £1,405,030.02 | **95.82%** |
| **Virgin Money** | £1,504,235.97 | £1,378,561.38 | **91.65%** |
| **Bank of Scotland** | £1,430,499.88 | £1,330,623.67 | **93.02%** |
| **Tesco Bank** | £1,579,983.49 | £1,435,512.93 | **90.86%** |

**Visualisation and *Note:***

I have selected the Bank, Amount applied and Amount Awarded columns and later the % column also to create the chart. After the selection of columns, I inserted the recommended chart and chose the chart design and type to present the visualisation. Then I inserted chart title, data tables to make the values clearer to be analysed.

In this way, we can see the ratio of amount applied and amount awarded by each bank and the % of loan awarded and can understand easily which bank has awarded more loans to the businesses in past so can be a good prediction for future loans.

**TASK 4-**

Create this table on your Word document and using either filtering or SUMIF to complete the Amount Applied and Loan Awarded columns. Use the appropriate calculation to complete the Percentage of Loan Awarded column.

  a)   Create an appropriate visualisation to compare the total applied for and awarded for the different businesses.

|  |  |  |  |
| --- | --- | --- | --- |
| **Business Name** | **Amount Applied** | **Loan Awarded** | **Percentage of Loan Awarded** |
| **Pump House** | £1,911,658.45 | £1,798,477.58 | **94.08%** |
| **Fitness Factory** | £1,845,543.11 | £1,719,038.02 | **93.15%** |
| **The Fitness Zone** | £1,749,082.12 | £1,621,992.20 | **92.73%** |
| **Waist Management** | £1,898,608.89 | £1,774,794.60 | **93.48%** |

**VISUALISATION and *Note*:**

I did this task like Task 3 and create column charts to show the ratio, or the values of amount applied and awarded for the different businesses. This way we can understand that which business has shown a good case or approach or strategy for the growth of their business in front of banks and got most of the amount of loans that it had applied for.

**TASK 5-**

a)       Based upon the results which bank would you recommend that a business applied for when needing a business loan

b)      Based upon the results which business do you think has put together the best business case

1. **According to my understanding, I would recommend NatWest or RBS banks to apply for a business loan as these are the highest loan awarding banks among other banks.**
2. **As per my understanding and results, Pump House is the business which has put together the best business case and got maximum loan among other businesses in the dataset.**

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