INVESTMENT ASSIGNMENT

SUBMISSION

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Abstract

The objective is to identify the best sectors, countries, and a suitable investment type for making investments. The overall strategy is to invest where others are investing, implying that the 'best' sectors and countries are the ones 'where most investors are investing'.

The overview of this assignment is to help Spark Funds with its investment and to predict which sector and which country they should invest in based on the funding type which is best fit following their constraints:

- It wants to invest between **5 to 15 million USD** per round of investment

- It wants to invest only in **English-speaking countries** because of the ease of communication with the companies it would invest in

Methodology

Data Loading into Data frames(companies and rounds2)

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Analyzing the data in these dataframes

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Since, it needs cleaning, like removing special characters, making the case of some columns same to avoid duplicates and checking the encodings

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Finding the unique values and after cleaning the data again analyze for the basic details like shape and not null values

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The 2 dataframes had company details and other had funding amount details and hence joining the two to make a more useful dataset and again analyzing (Inner Join is used)

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Plotting our analysis and inferences in the plots

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Extracting the main sector and finding the suitable sector for our investment in our 3 countries

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Here, we got the funding type we need to find what are the top 3 English speaking countries fulfilling our 2nd constraint

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From the analysis, Venture type is suitable for our investment bracket so filtering the master frame on that basis

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Analyzing the master frame and filtering based on out 4 main funding types and performing analysis

Analysis

This analysis starts with cleaning of the data where out of the 114949 rows, after data cleaning it had only 94397 which excluded null values and unnecessary data

The analysis was divided into 3 main categories:

• Funding Type Analysis

• Country Analysis

• Sector Analysis

During the funding type analysis,

Venture type was found to be the most suitable type as it had its mean amount raised between 5 to 15 million which was within our bracket

After funding type, we found out that USA, Britain and India are the top 3 copuntires in which Sparks Fund should invest in

Also, at the last stage of analysis we found out the best sector with highest investments in these countries is OTHERS sector

Analysis

1. Funding Type Analysis:

   The Dataset contains a number of investment type. We found Private Equity, Seed, Angel and Venture Types to be prominent in our analysis. Private Equity has the highest average amount of investment(73308593.03 Million USD). Since it does not fall into the margins set by Sparks Funds, this was not suitable. Venture, seems to be the best funding type as it has avg. investments of 11748949.13 Million Dollars.

2. Country Analysis:

   The Country Analysis is done on Venture Type Funding. If we look into the dataset provided here, we can see there are more than 100 countries included.

   But the major investment was done in a very few countries including USA, China, Great Britain, India, Japan, Germany

   Since, China's official language is not English hence, we shall go ahead and consider only USA, GBR and India

3. Sector Analysis :

   We mapped these sectors with 8 major sectors to make the analysis simple and clean. Top 3 sectors for the top 3 countries were identified in this study.

   It was seen that the prominent sectors for these countries were the same which are 'Others', 'Social/Finance/Analytics/Advertising' and 'Cleantech / Semiconductors' in the order

Analysis

The pie chart below shows the fraction of investments in all funding types globally.
And the bar char shows the investment across the top3 countries
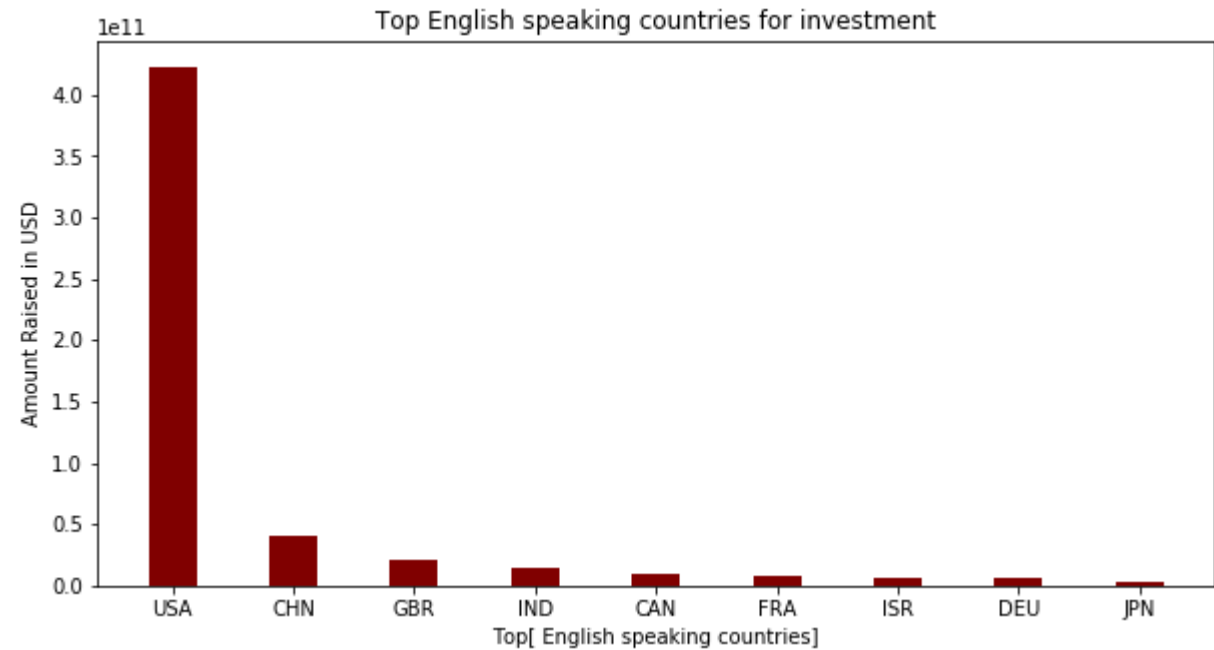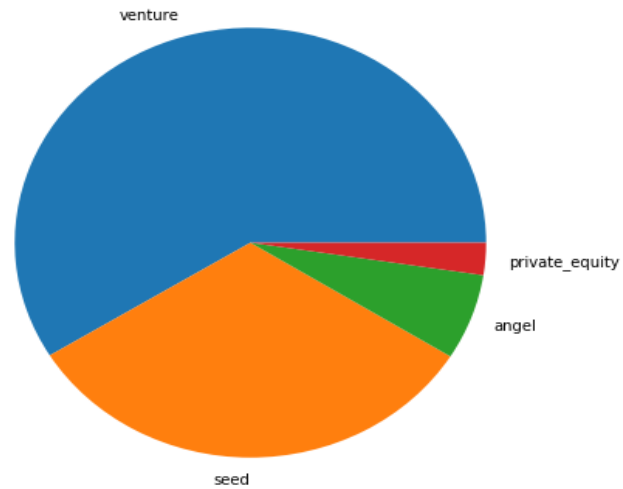
A plot showing the fraction of total investments (globally) in angel, venture, seed, and private equity, and the average amount of investment in each funding type. This chart should make it clear that a certain funding type (FT) is best suited for Spark Funds.
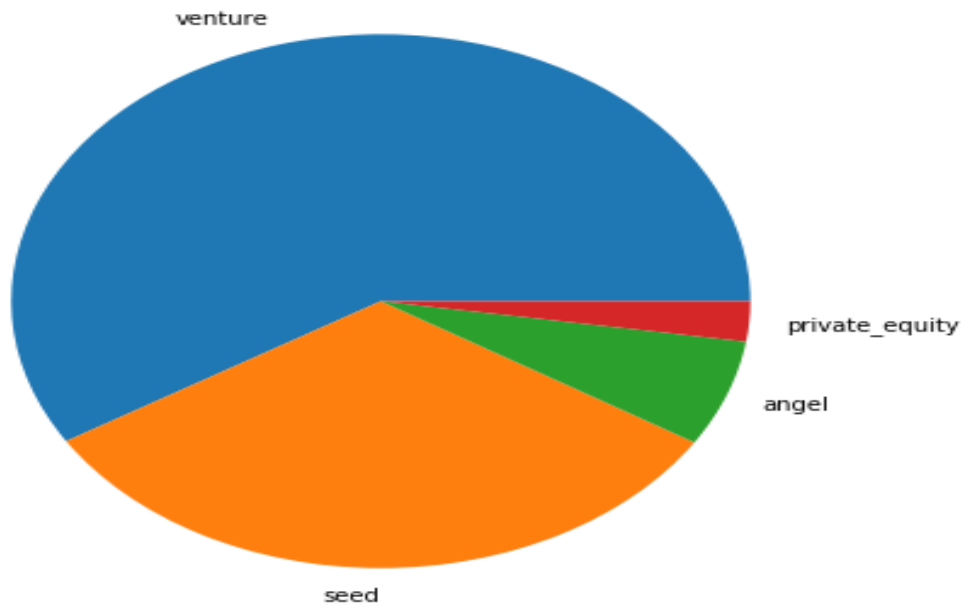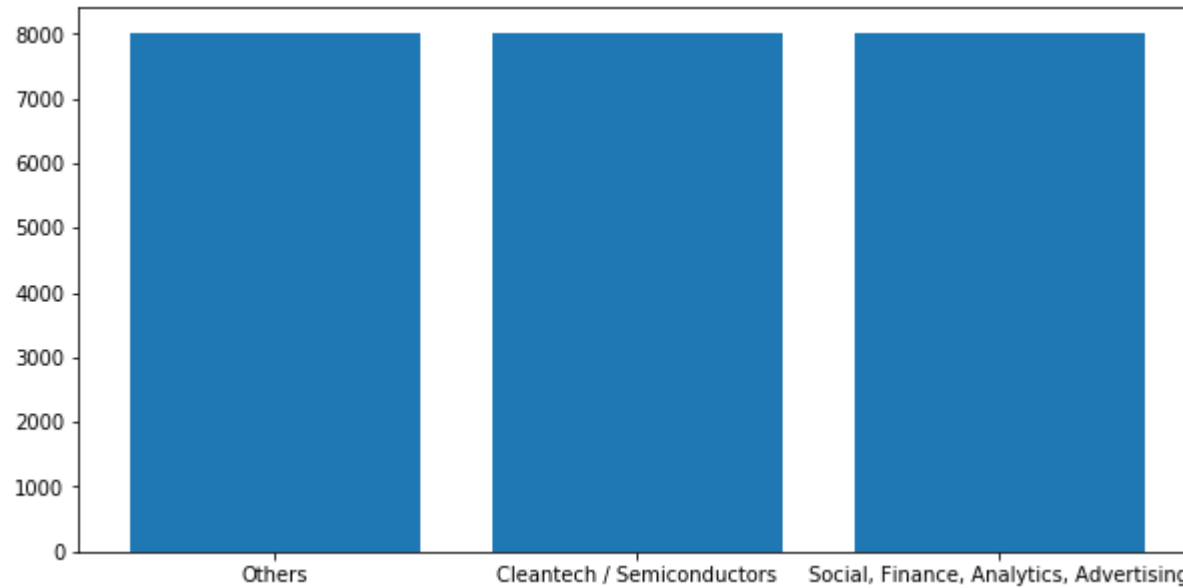
Results

A plot showing the top 9 countries against the total amount of investments of funding type FT. This should make the top 3 countries (Country 1, Country 2, and Country 3) very clear.
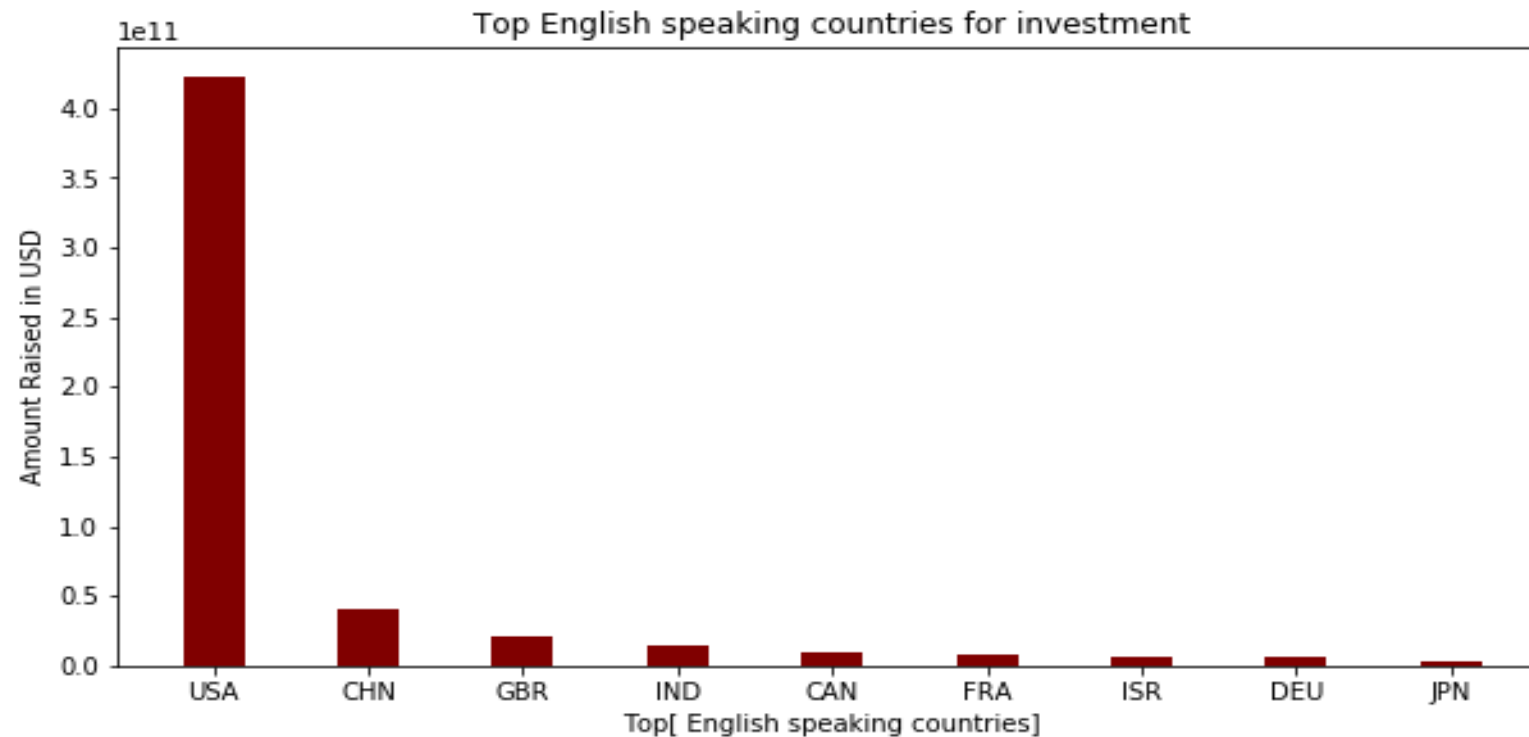
Results:

A plot showing the number of investments in the **top 3 sectors** of the **top 3 countries** on one chart (for the chosen investment type FT).

Conclusions

Based on the data analysis performed, SparksFunds should invest in -

- Funding type - **Venture**.
- Countries - **USA, Britain and India, respectively.**
- Top two sectors to invest in are - **Others and Social, Finance, Analytics, Advertising.**