INVESTMENT ASSIGNMENT

SUBMISSION

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INVESTMENT ASSIGNMENT

Spark Fund Investment Analysis

Abstract

Objective:

To understand the global trends in investments so that investment decisions can be made effectively.

Spark Funds has two minor constraints for investments:

➢ 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.

Strategy:

Spark Funds wants to invest where most other investors are investing. This pattern is often observed among early stage startup investors.
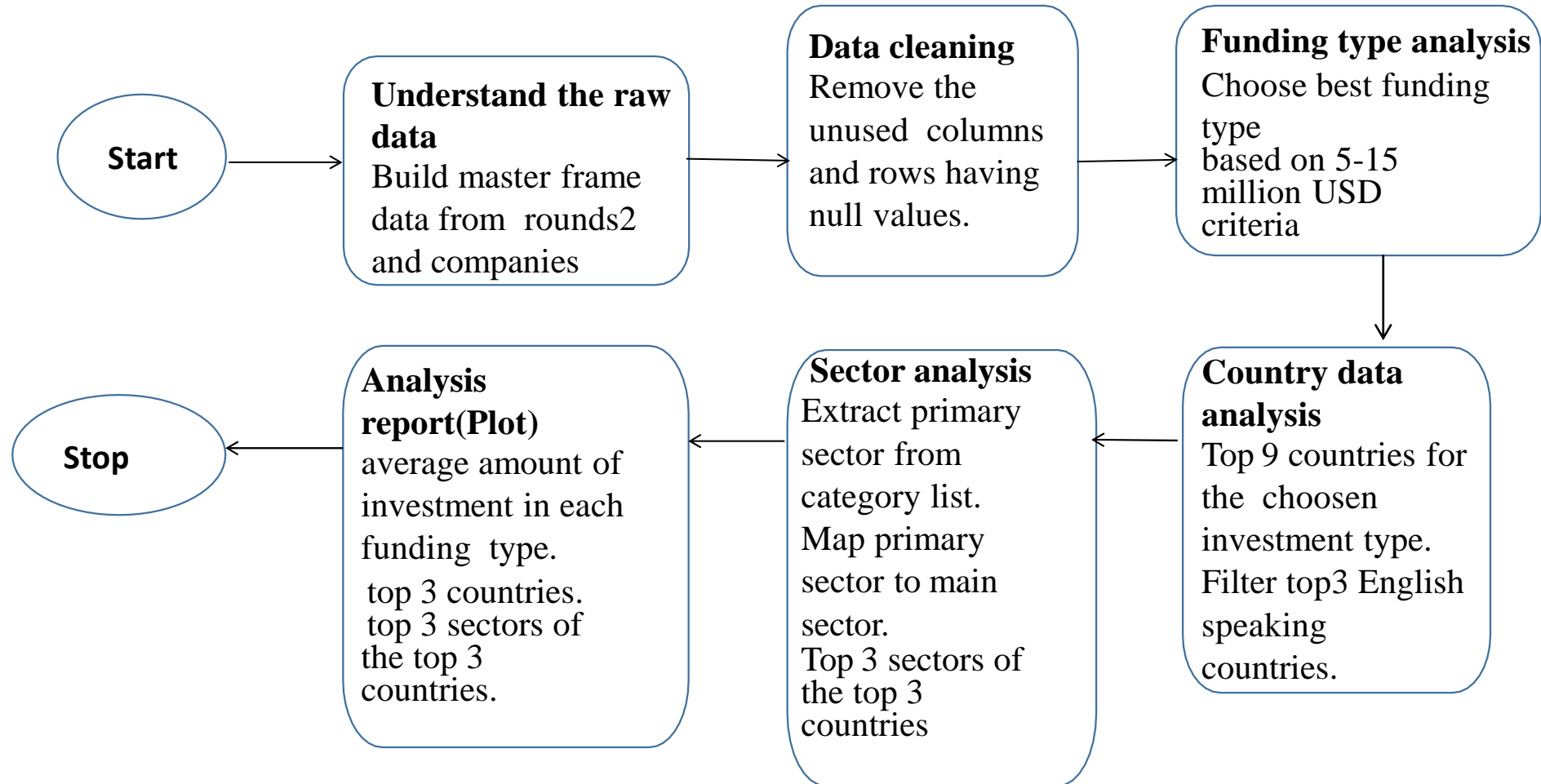
Goals:

Investment type analysis : choose the best funding type from four major type of funding – Angel,Venture,seed and private equity.

Country analysis : Identifying the countries which have been the most heavily invested in the past.

Sector analysis : Understanding the distribution of investments across the eight main sectors

Problem solving methodology

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Start  →  Understand the raw data
          Build master frame data from rounds2 and companies
          →
          Data cleaning
          Remove the unused columns and rows having null values.
          →
          Funding type analysis
          Choose best funding type based on 5-15 million USD criteria
          ↓
Stop  ←   Analysis report(Plot)
          average amount of investment in each funding type.
          top 3 countries.
          top 3 sectors of the top 3 countries.
          ←
          Sector analysis
          Extract primary sector from category list.
          Map primary sector to main sector.
          Top 3 sectors of the top 3 countries
          ←
          Country data analysis
          Top 9 countries for the choosen investment type.
          Filter top3 English speaking countries.
```

Analysis

This assignment is mainly divided into 4 categories :

1. Data cleaning

2. Funding type analysis

3. Country analysis

4. Sector analysis

For analysis firstly two dataframes are created from companies and rounds2 .

Above two data frames is merged together to form master_frame.Then starts the data cleaning process of the master_frame.

Analysis

1) **Data Cleaning:**
   - In this process unused columns and rows with null values are removed.
     Initially master_frame shape is (114949, 16).
   - After data cleaning master_frame shape is (88529, 6)

2) **Funding type analysis:**
   - There are various investment types in the dataset in which prominent ones are private equity,seed,angel and venture.
   - Private equity has the highest average amount of investment but since it doesn't lie in range 5-15 million USD so it is not a suitable investment for spark fund.
   - Venture seems to be the best funding type as it has an average investment of 11.7 million dollar. Considering the sum of investment ,Venture is the most invested with highest total .
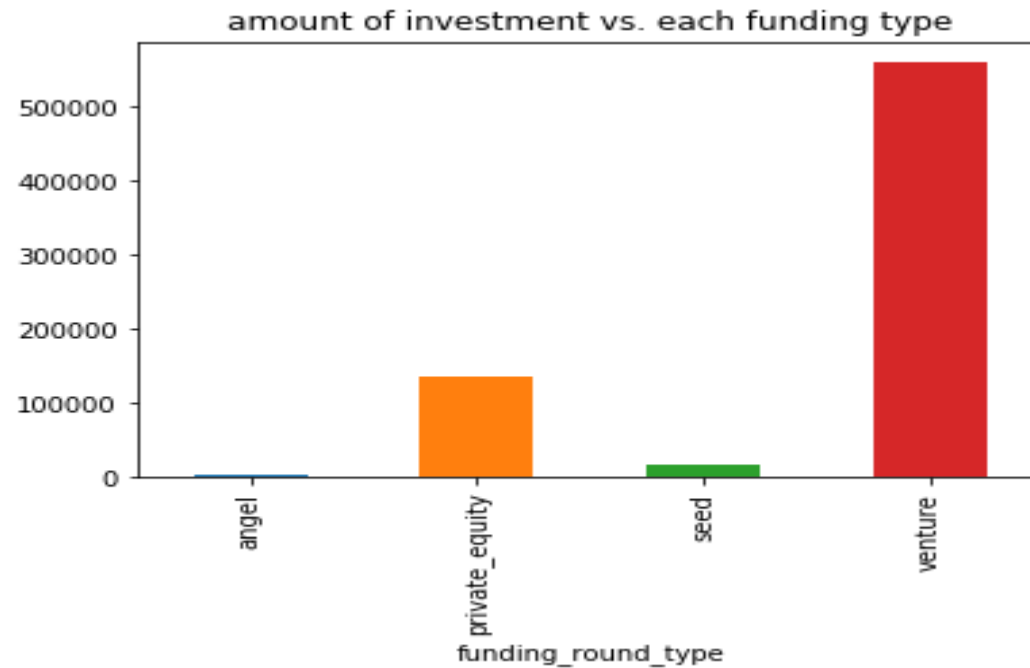
Analysis

3) Country analysis:

➢ Spark Funds wants to see the top nine countries which have received the highest total funding across all sectors for chosen investment type.

➢ Top9 dataframe is created for the chosen investment type based on the total investment amount each country has received.

➢ Top three English speaking countries are identified from Top9.

4) Sector analysis:

➢ Category list column is split to form primary sector mapped to 8 main sector for smoother analysis. Top 3 sectors for the top 3 countries are identified in this section.

➢ It is seen that the prominent sector for the top three countries are:

 ✓ Others

 ✓ Social, Finance, Analytics, Advertising

 ✓ Cleantech / Semiconductors

Results

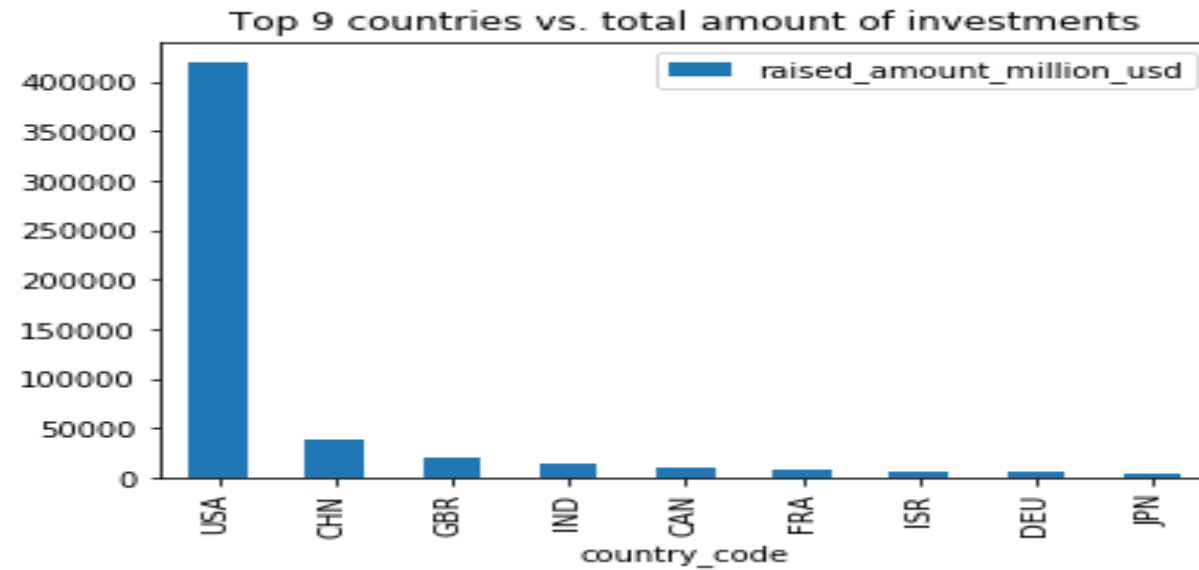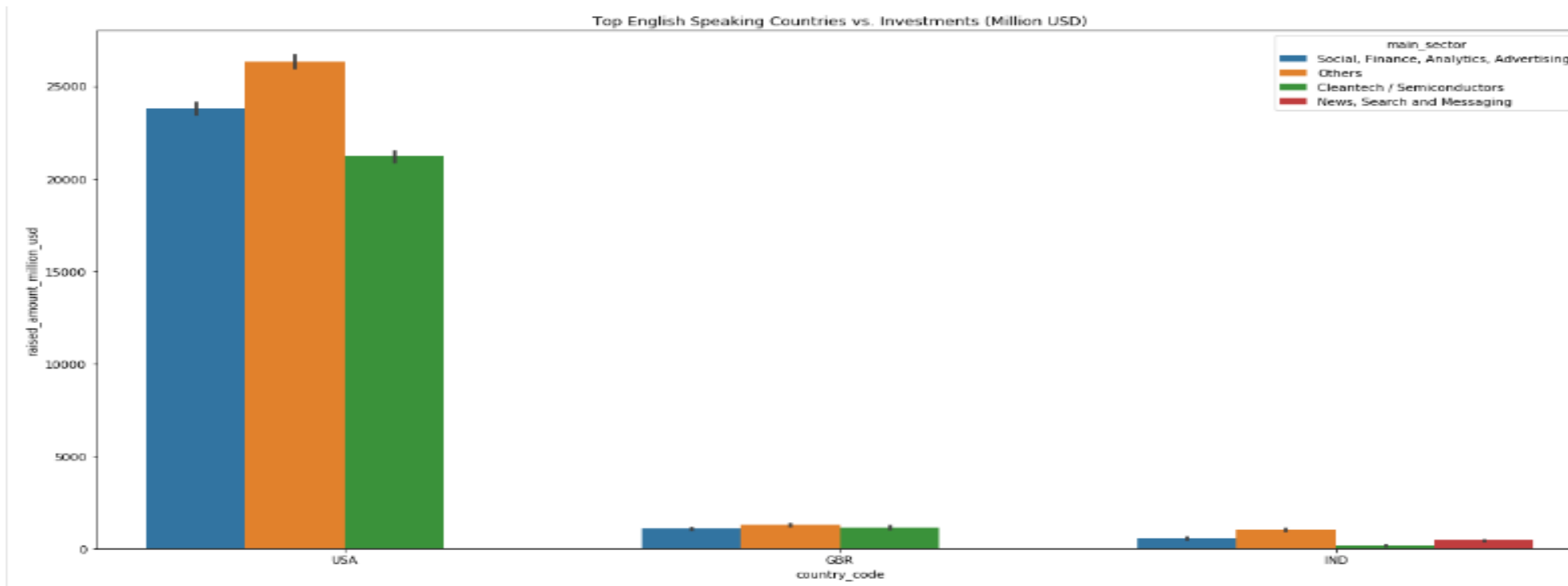Plot 1: A plot showing the representative amount of investment in each funding type:

Results

Plot 2: A plot showing the top 9 countries against the total amount of investments of funding type FT

Results

Plot 3: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

After performing the complete analysis,below are the conclusions :

❖ Best investment type is : **Venture**

❖ Top three English speaking countries are : **USA,GBR,IND**

❖ Top three sectors for top three countries are:

1. Others

2. Social, Finance, Analytics, Advertising

3. Cleantech / Semiconductors

Based on the above results,Spark Fund can take the investment decisions effectively.