

INVESTMENT ASSIGNMENT

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Spark Fund Investment Case Study

Abstract:

Spark Funds wants to make investments in a few companies. The CEO of Spark Funds wants to understand the global trends in investments so that she can take the investment decisions effectively.

Business Understanding:

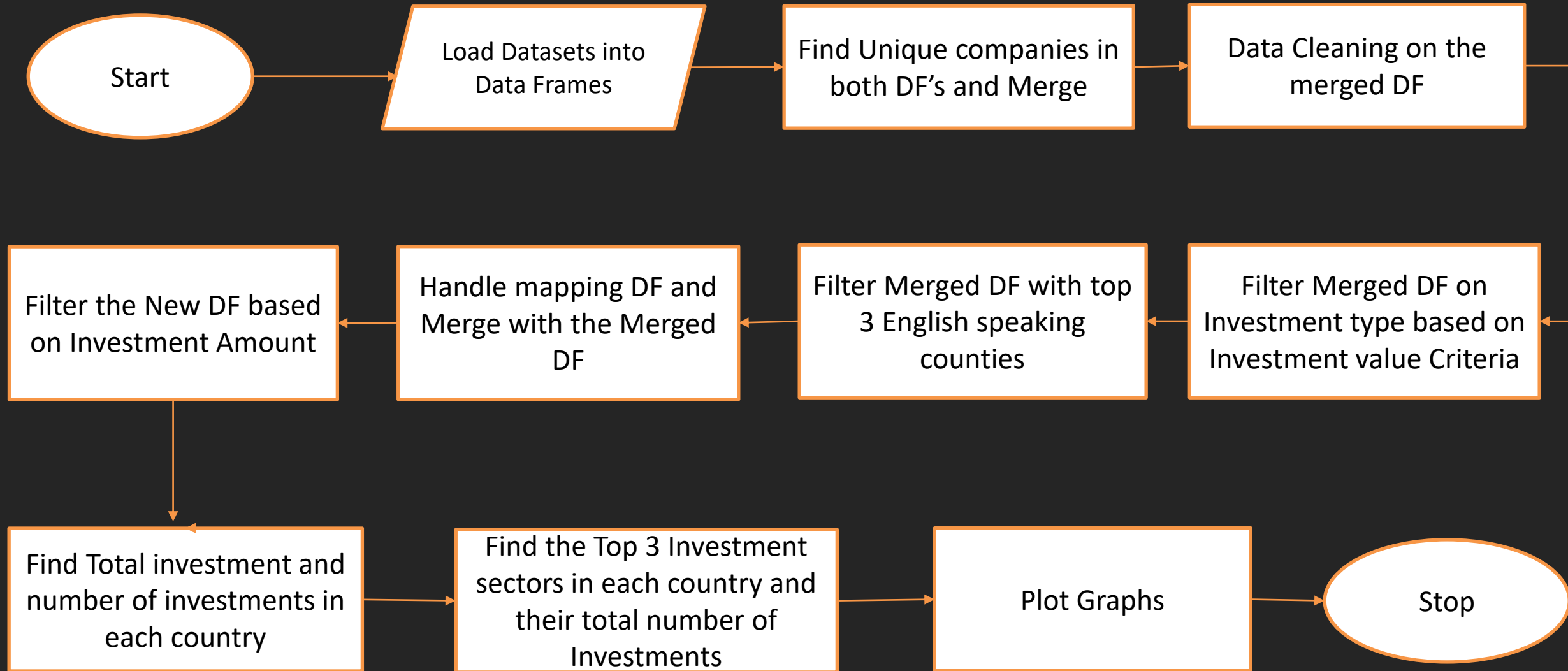
Spark Funds has two minor constraints for investments:

- *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*

Data Understanding:

- **Companies** : *A table with basic data of companies*
- **Rounds2** : *A table with funding round details*
- **Mapping** : *This file maps the numerous category names in the companies table to eight broad sector names.*

Problem solving methodology





Data Analysis

- Load the *companies* and *rounds* data (provided on the previous page) into two data frames and named them *companies* and *rounds2* respectively.

Understand the Data Set		
Sl. No	Questions	Answer
1	How many unique companies are present in rounds2?	66368
2	How many unique companies are present in the companies file?	66368
3	In the <i>companies</i> data frame, which column can be used as the unique key for each company? Write the name of the column.	permalink
4	Are there any companies in the rounds2 file which are not present in <i>companies</i> ? Answer Y/N.	N
5	<i>companies</i> frame are added to the <i>rounds2</i> data frame. Name the merged frame <i>master_frame</i> . How many observations are present in <i>master_frame</i> ?	114949



Funding Type Analysis

- *Considering that Spark Funds wants to invest between 5 to 15 million USD per investment round.*
- *Identify the investment type and, for further analysis, filter the data so it only contains the chosen investment type*

Sl.No	Questions	Answer
1	Average funding amount of venture type	1,17,24,222.70
2	Average funding amount of angel type	9,71,573.90
3	Average funding amount of seed type	7,47,794
4	Average funding amount of private equity type	7,39,38,486
5	Considering that Spark Funds wants to invest between 5 to 15 million USD per investment round, which investment type is the most suitable for them?	Venture



Country Analysis

- The top nine countries which have received the highest total funding (across ALL sectors for the chosen investment type)
- For the chosen investment type, make a data frame named top9 with the top nine countries (based on the total investment amount each country has received)
- Concluding the top 3 English speaking countries.

Analysing the Top 3 English-Speaking Countries		
Sl.No	Questions	Answers
1	Top English speaking country	USA
2	Second English speaking country	GBR
3	Third English speaking country	IND



Sector Analysis

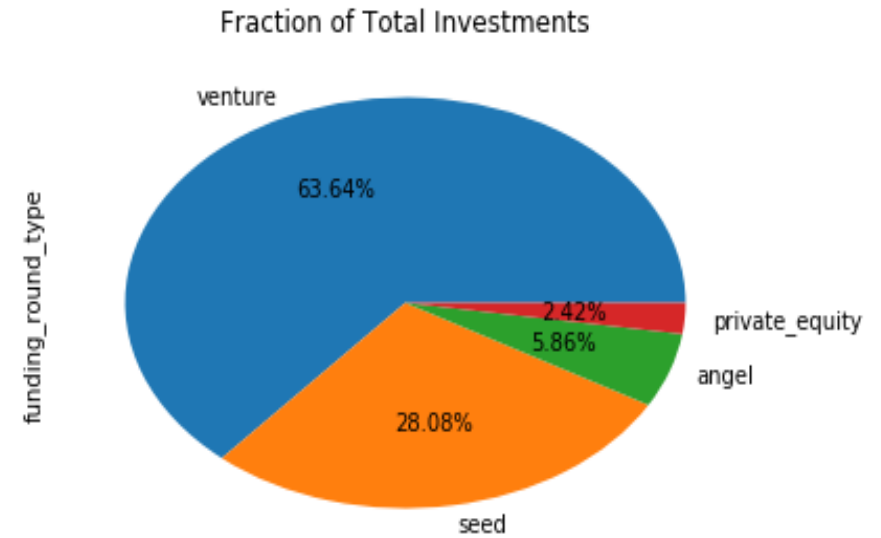
- Extract the primary sector of each category list from the category_list column
- Use the mapping file 'mapping.csv' to map each primary sector to one of the eight main sectors

Sector-wise Investment Analysis			
Questions	C1	C2	C3
Total number of Investments (count)	12063	621	328
Total amount of investment (USD)	1.07757E+11	5379078691	2949543602
Top Sector name (no. of investment-wise)	Others	Others	Others
Second Sector name (no. of investment-wise)	Social, Finance, Analytics, Advertising	Social, Finance, Analytics, Advertising	Social, Finance, Analytics, Advertising
Third Sector name (no. of investment-wise)	Cleantech / S	Cleantech /	News, Search and Messaging
Number of investments in top sector (3)	2950	147	110
Number of investments in second sector (4)	2714	133	60
Number of investments in third sector (5)	2350	130	52
For point 3 (top sector count-wise), which company received the highest investment?	Monetate	SilverRail	Tejas Networks India
For point 4 (second best sector count-wise), which company received the highest investment?	Three Stage M	myThings	Shiram Credit

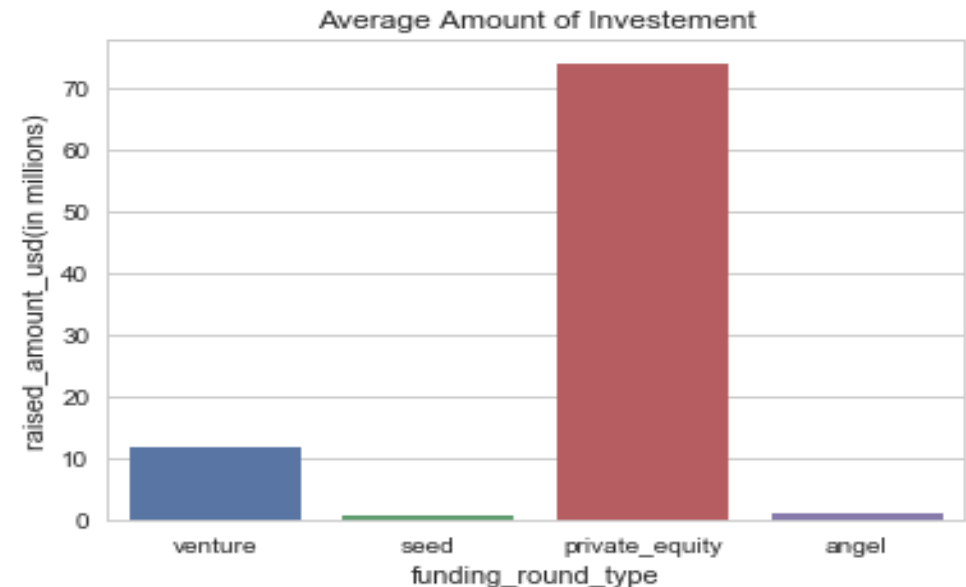


Plots

- *Pie Plot to display the fraction of total investments in venture, seed, angel and private_equity.*
- *Bar plot to display the average amount of investment in Millions USD*

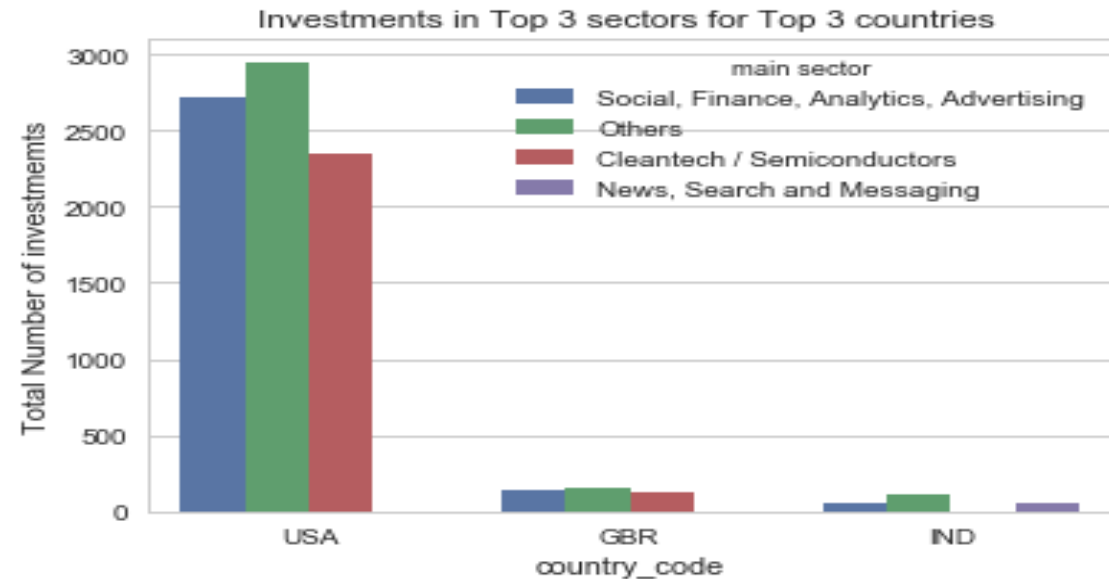
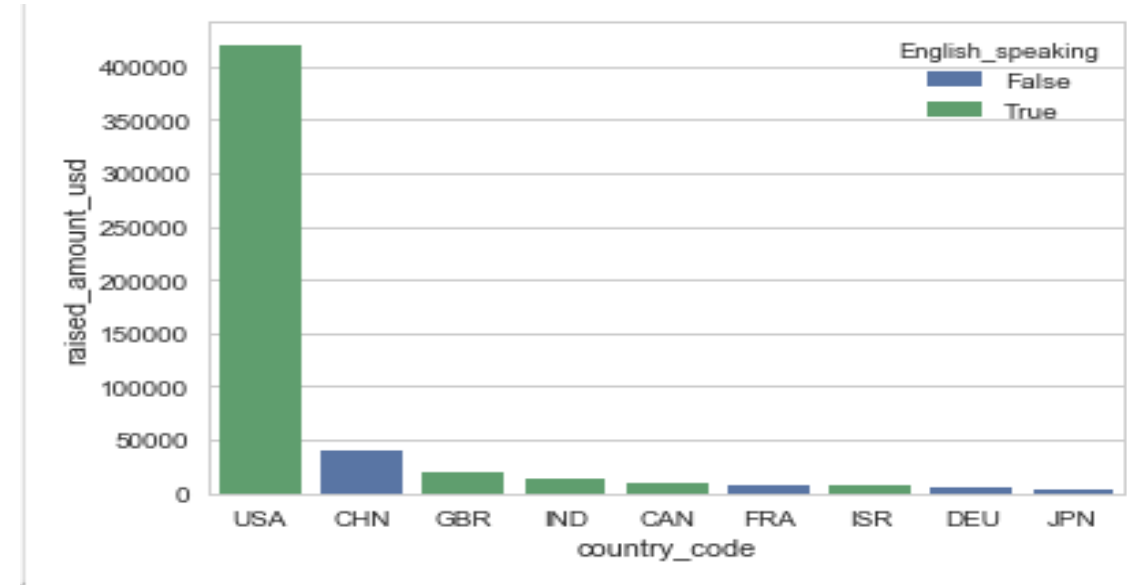


Bar plot to display the average amount of investment in Millions USD



Plots

- The First plot showing the top 9 countries against the total amount of investments of funding type Venture.
- The second plot showing the number of investments in the top 3 sectors of the top 3 countries



Conclusions

Based on above analysis, the following is the suggested investment strategy :

➤ *Suitable Investment Type : Venture*

➤ *Best sectors to invest :*

- *Others*
- *Social, Finance, Analytics, Advertising*
- *Cleantech / Semiconductors*
- *News, Search and Messaging*

➤ *Top 3 countries to invest :*

- *United States of America(USA)*
- *United Kingdom(GBR)*
- *India(IND)*