INVESTMENT ASSIGNMENT

SUBMISSION

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Abstract

- ## Problem:

  - Understanding the global trends in investments which will help to make the effective investment decisions for Spark Funds CEO.
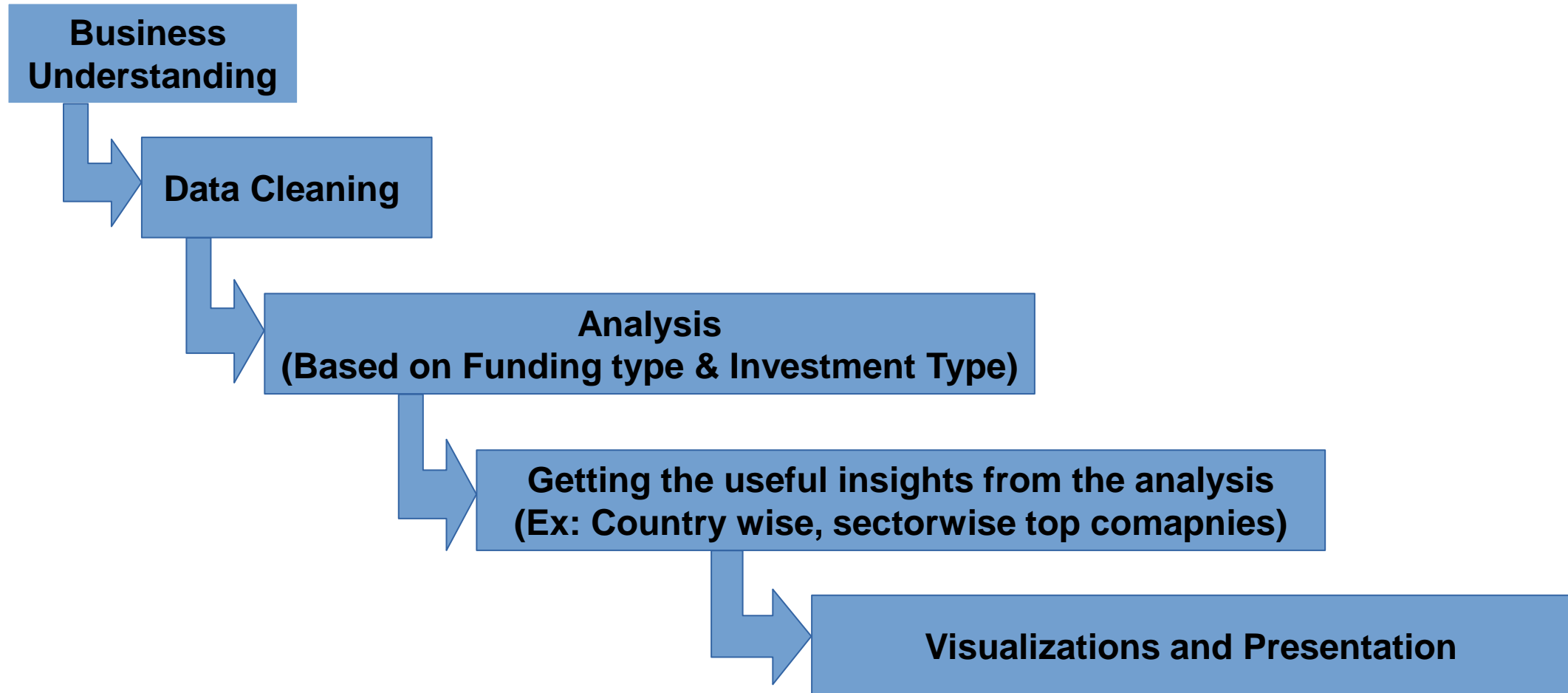
- ## Goals:

  - To identify the best countries, suitable type of investment and sectors in which Spark Funds can invest to get the maximum profit.

- ## Constraints for investments:

  - Invest between 5 to 15 million USD per round of investment

  - Invest only in English-speaking countries because of the ease of communication with the companies.

Problem solving methodology

Business Understanding

Data Cleaning

Analysis
(Based on Funding type & Investment Type)

Getting the useful insights from the analysis
(Ex: Country wise, sectorwise top comapnies)

Visualizations and Presentation

Analysis : Understanding the data set

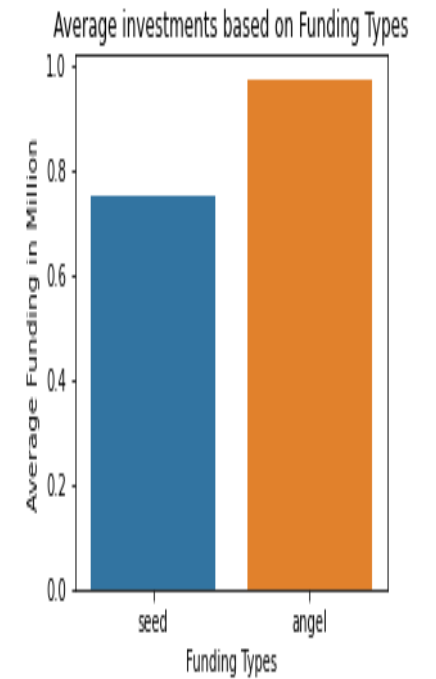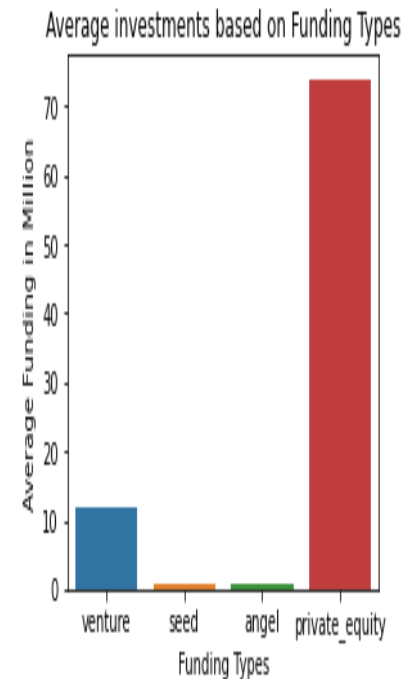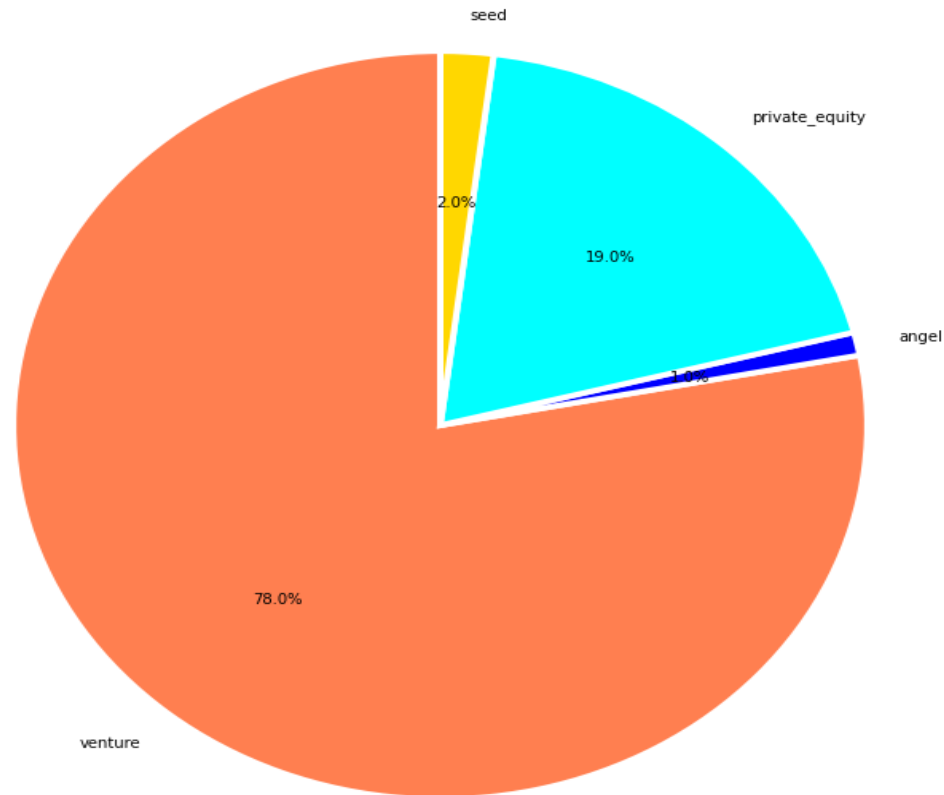| Sl. No	Questions	Answer
1	How many unique companies are present in rounds2?	90247
2	How many unique companies are present in the companies file?	66368
3	In the companies data frame, which column can be used as the unique key for each company? Write the name of the column.	'permalink'
4	Are there any companies in the rounds2 file which are not present in companies ? Answer Y/N.	Y
5	Merge the two data frames so that all variables (columns) in the companies frame are added to the rounds2 data frame. Name the merged frame master_frame. How many observations are present in master_frame ?	114942

Analysis: Average values of Investments for each of the Funding Types

Sl.No	Questions	Answer
1	Average funding amount of venture type	$ 11.7242M
2	Average funding amount of angel type	$ 0.9716M
3	Average funding amount of seed type	$ 0.7478M
4	Average funding amount of private equity type	$ 73.9385M
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 Type

Analysis: Sectorwise Investment in Top3 countries (USA, GBR, IND)

Sl.no	Questions	C1	C2	C3
1	Total number of Investments (count)	12092	622	328
2	Total amount of investment (USD)	108002.097 Million USD	5394.079 Million USD	2949.544 Million USD
3	Top Sector name (no. of investment-wise)	Others	Others	Others
4	Second Sector name (no. of investment-wise)	Social, Finance, Analytics, Advertising	Social, Finance, Analytics, Advertising	Social, Finance, Analytics, Advertising
5	Third Sector name (no. of investment-wise)	Cleantech / Semiconductors	Cleantech / Semiconductors	News, Search and Messaging
6	Number of investments in top sector (3)	2957	148	110
7	Number of investments in second sector (4)	2718	133	60
8	Number of investments in third sector (5)	2355	130	52
9	For point 3 (top sector count-wise), which company received the highest investment?	Virtustream	Electric Cloud	FirstCry.com
10	For point 4 (second best sector count-wise), which company received the highest investment?	SST Inc. (Formerly ShotSpotter)	Celltick Technologies	Manthan Systems

Plot shows the fraction of total investments (globally) in angel, venture, seed, and private equity, and the average amount of investment in each funding type.
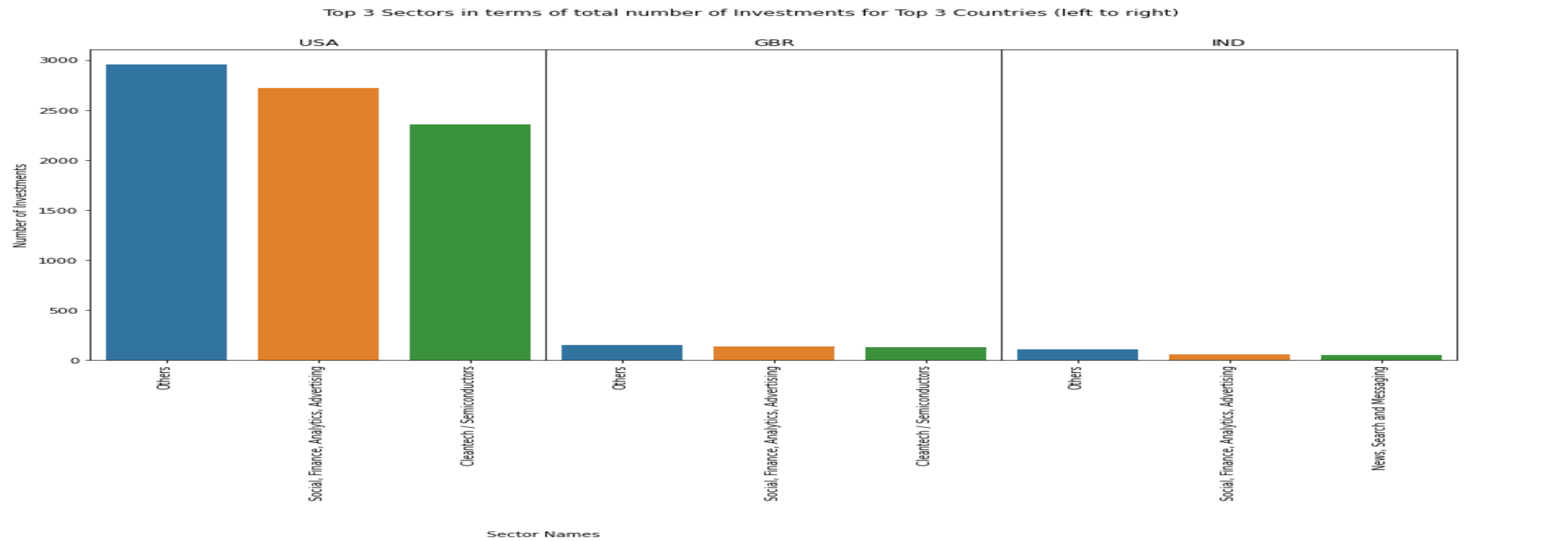
Note : From the fraction of investments plot and the average investment plots we can conculde that **Venture Type** is best suited for investment for Spark Funds.

Plot shows the top 9 countries against the total amount of investments (for 'Venture' type)

Top9 countries against Total investments in Venture Type

Plot shows the number of investments in the top 3 sectors of the top 3 countries (for the Venture type)

Top 3 Sectors in terms of total number of Investments for Top 3 Countries (left to right)

Conclusions:

On the basis of analysis,

1. Spark Funds should invest in Venture Type of funding as it has an average investment of approx 11.7 Million USD

2. Top 3 countries for investments are : USA , United Kingdom and India

3. Top 2 sectors to invest considering all the 3 countries are:
    * Others
    * Social, Finance,Analytics and Advertising