



INVESTMENT ASSIGNMENT SUBMISSION

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SPARK FUNDS INVESTMENT OPPORTUNITY ANALYSIS

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:

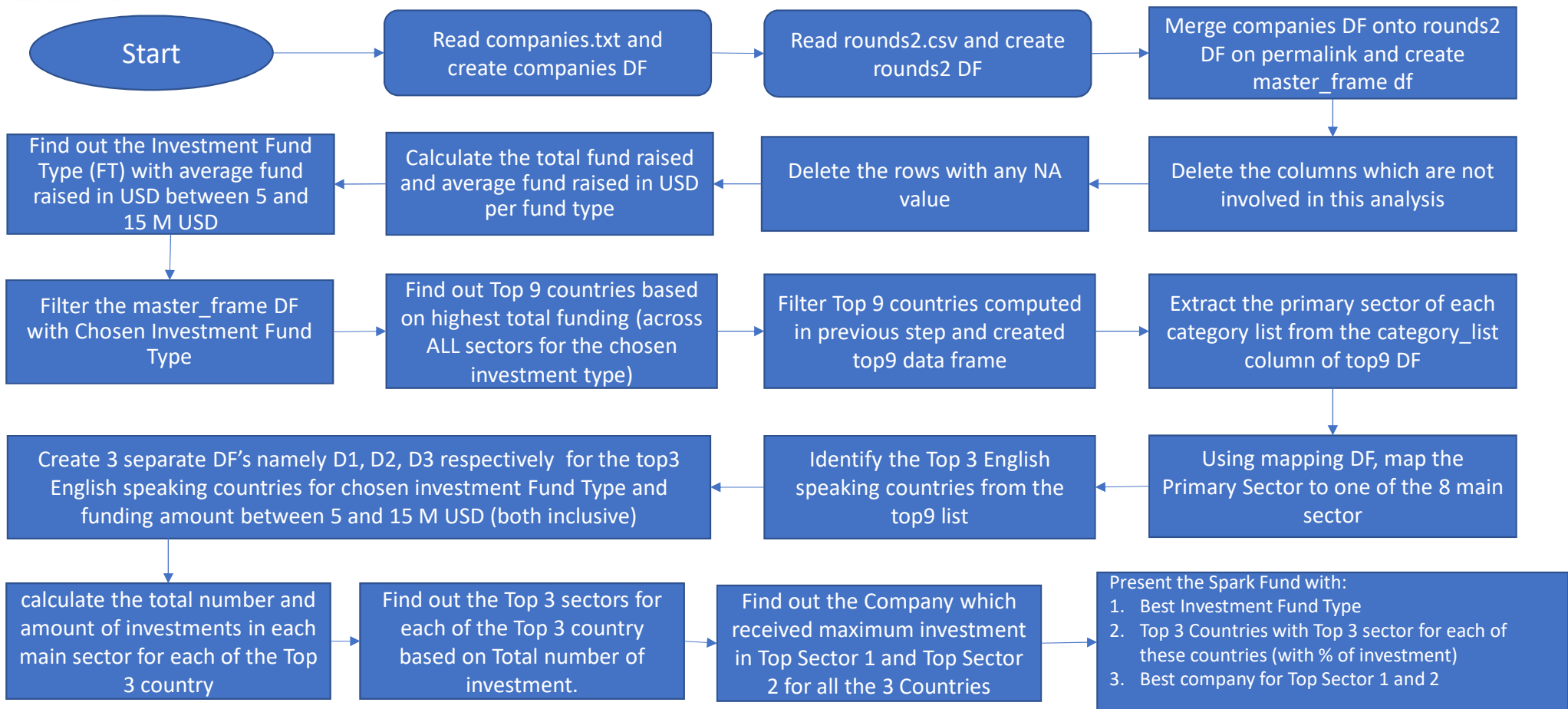
Spark Funds has two minor constraints for investments:

- 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.

BUSINESS OBJECTIVE OF THE ANALYSIS:

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'.

Spark Fund Investment Strategy Analysis – Flow Chart

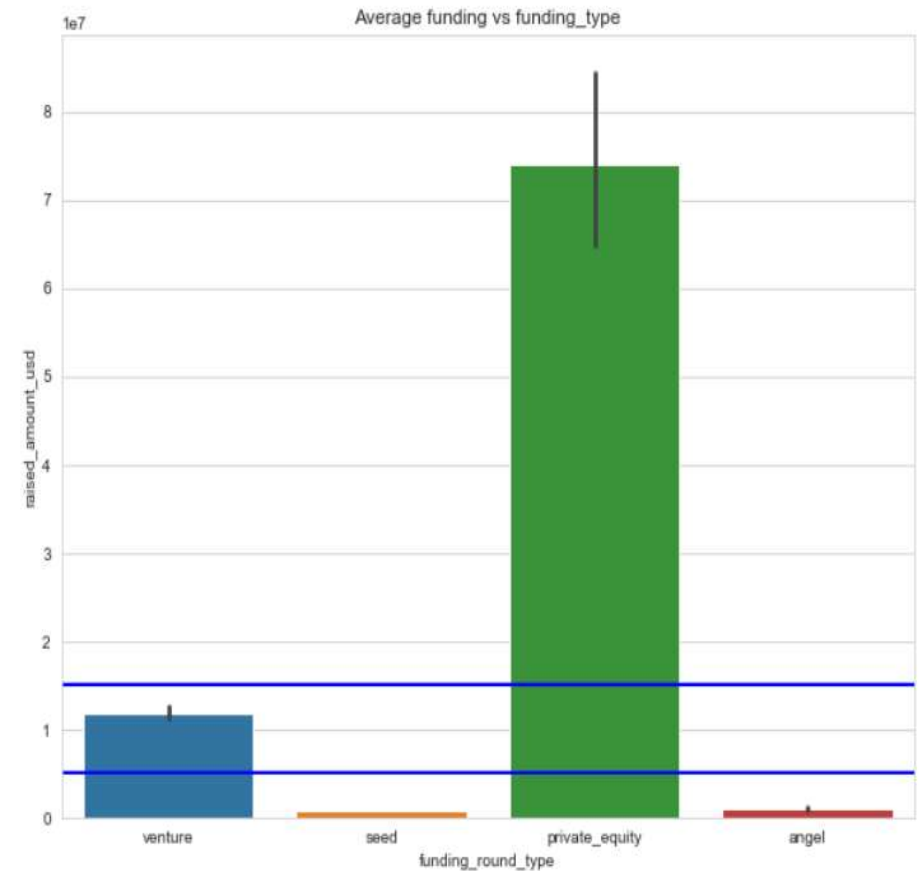


UNDERSTAND THE DATA SET

UNDERSTAND THE DATA SET		
1	Number of Unique companies in companies file	66368
2	Number of Unique companies in rounds2 file	66368
3	Name of the column used as unique key for each company in companies data frame	permalink
4	Are there any companies in round2 file which are not in companies file	No
5	After merging companies frame with round2 data frame, number of observations present in the master_frame	114949

AVERAGE VALUES OF INVESTMENT FOR EACH FUNDING TYPES

Average Funding Amount for Venture Type	\$ 11724222.69
Average Funding Amount for Angel Type	\$ 971573.89
Average Funding Amount for Seed Type	\$ 747793.68
Average Funding Amount for Private Equity Type	\$ 73938486.28
Considering the Spark Fund wants to invest between 5 to 15 M USD per investment round, investment type most suitable for them:	Venture



COUNTRY AND SECTOR-WISE INVESTMENT ANALYSIS

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

Sector-wise Investment Analysis				
Sl.no		USA	GBR	IND
1	Total number of Investments (count)	12063	621	328
2	Total amount of investment (USD)	\$107,757,097,294.00	\$5,379,078,691	\$2,949,543,602
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)	2950	147	110
7	Number of investments in second sector (4)	2714	133	60
8	Number of investments in third sector (5)	2350	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

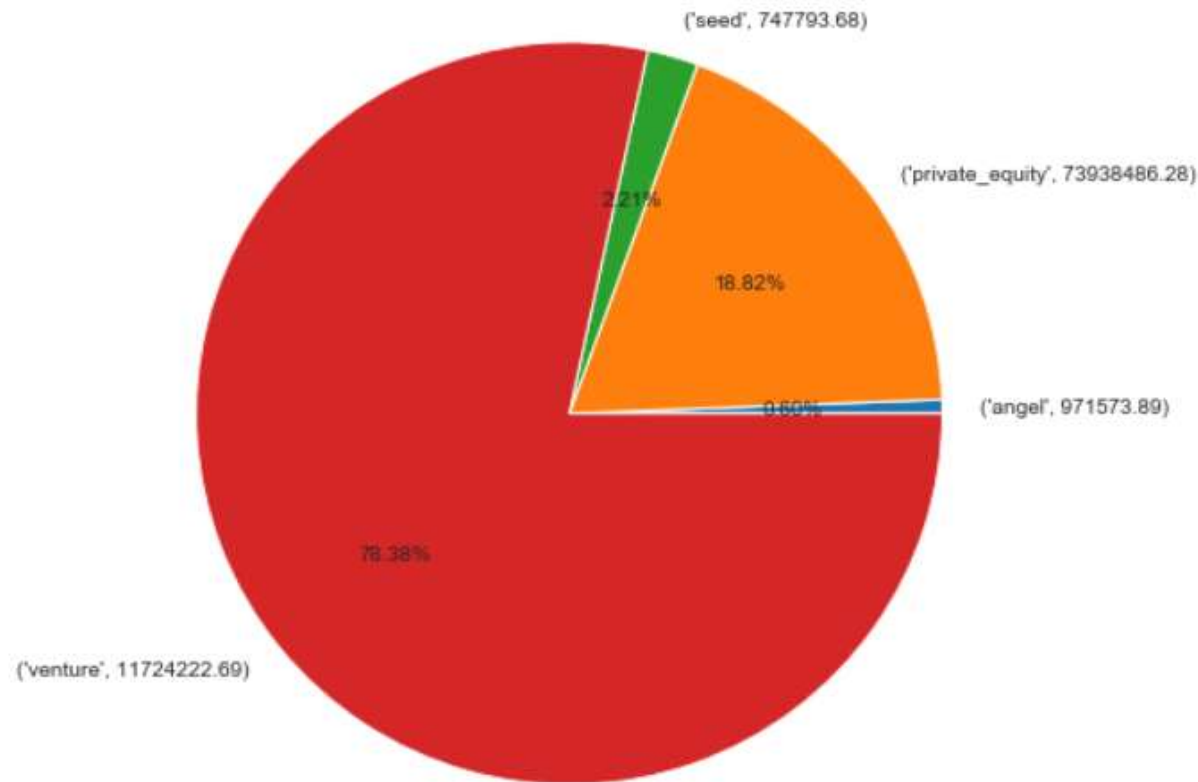
Assumptions:

1. Only considered venture fund type with raised amount in USD between 5M-15M (both inclusive)
2. Removed the blank sector and NA values from Mappings.csv. Also corrected the misspelling by replacing 0 with 'na'



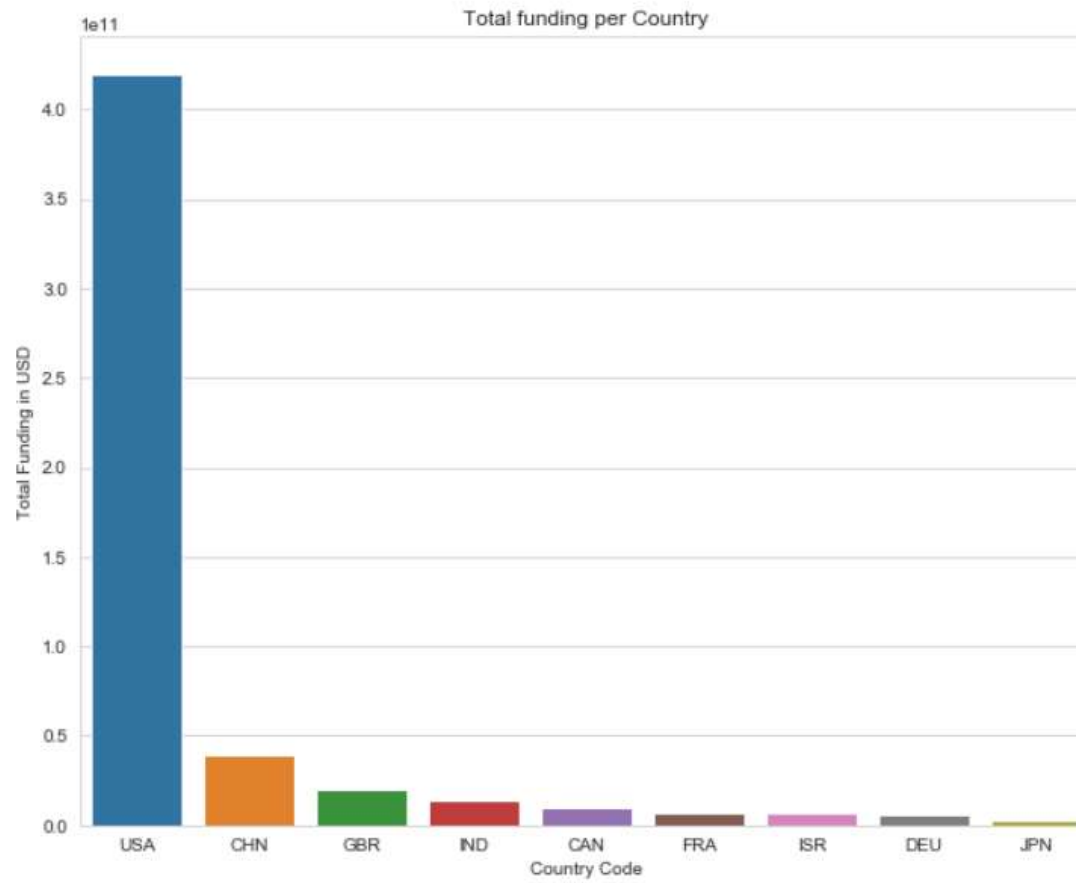
FRACTION OF TOTAL INVESTMENTS (GLOBALLY) IN VENTURE, SEED, ANGEL, PRIVATE EQUITY, AND THE AVERAGE AMOUNT OF INVESTMENT IN EACH FUNDING TYPE

Funding percentage and Average Fund Across Seed, Venture, Angel, Private Equity



Assumptions: The pie chart label displays the Fund type and Average Funding in USD for that type.

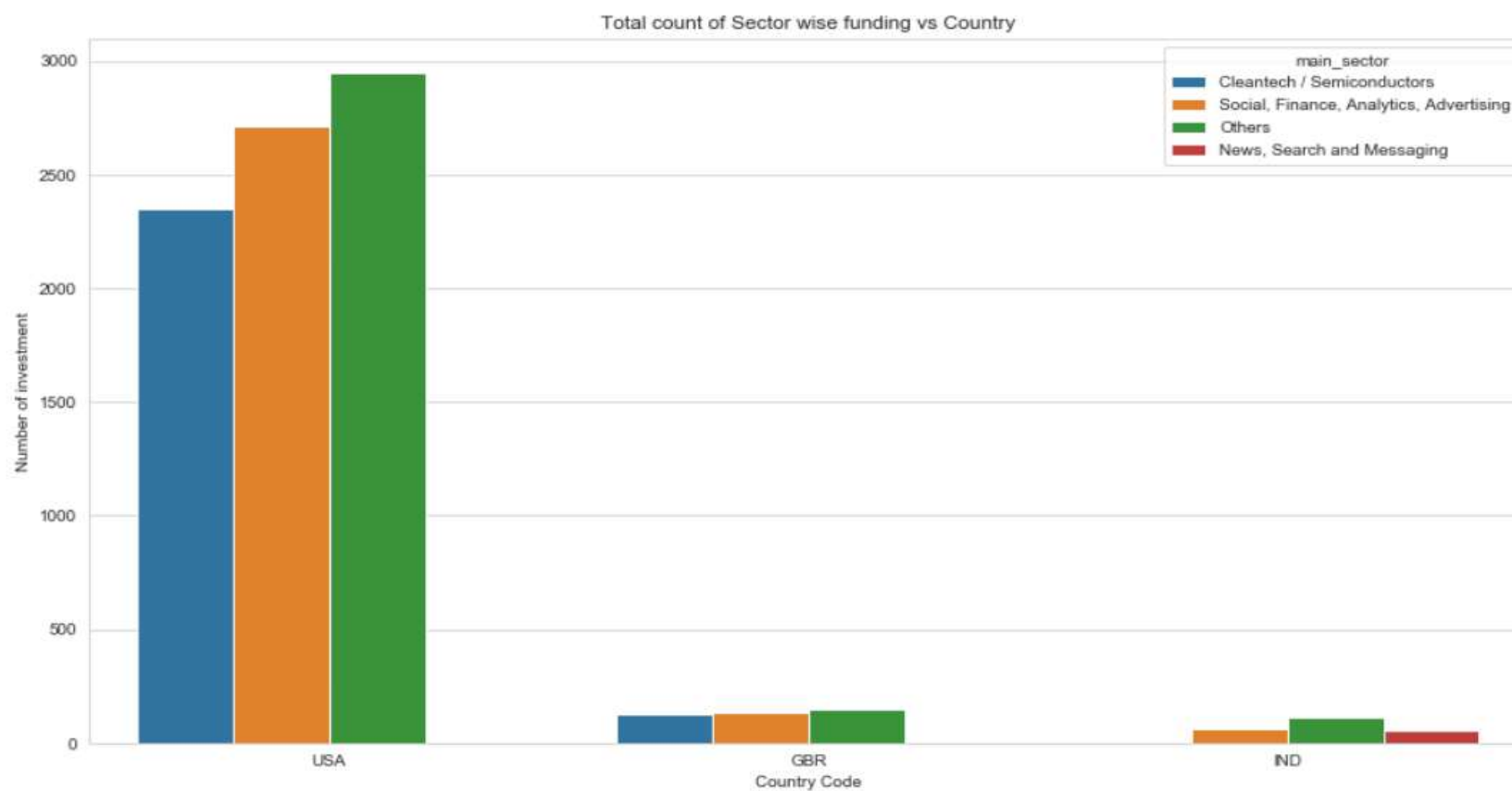
TOP 9 COUNTRIES BASED ON THE AMOUNT OF INVESTMENT



Assumptions: For top 9 analysis all countries are considered. Hence this includes non English speaking countries also. Note that CHN is non English speaking country.

Top 3 English Speaking Countries in this list are (in the descending order of Total fund): USA, GBR, IND

NUMBER OF INVESTMENTS IN THE TOP 3 SECTORS OF THE TOP 3 COUNTRIES



Assumptions: Only English Speaking Countries are considered for Top3 Analysis



Recommendations



- Given the fact that Spark Fund want invest between **5 to 15 million USD** per round of investment, the best suited Fund Type is VENTURE
- Top 3 English Speaking countries where spark fund can consider investing, is as given below with percentage of investment (% is based on total Amount) across these 3 countries.

Country ID	Percentage of Investment
USA	92.83%
GBR	4.63%
IND	2.54%

- Spark Fund can consider investing in following Top 3 Sectors in each of the countries (below table provides sector-wise investment percentage and company which received maximum funding in top two sectors):

USA			GBR			IND		
SECTOR	% *Refer 1	COMPANY	SECTOR	% *Refer 1	COMPANY	SECTOR	% *Refer 1	COMPANY
OTHERS	36.68	VIRTUSTREAM	OTHERS	36.29	Electric Cloud	OTHERS	50.73	FirstCry.com
SOCIAL, FINANCE, ANALYTICS, ADVERTISING	33.18	SST Inc	SOCIAL, FINANCE, ANALYTICS, ADVERTISING	30.80	Celltick Technologies	SOCIAL, FINANCE, ANALYTICS, ADVERTISING	27.56	Manthan Systems
CLEANTECH / SEMICONDUCTORS	30.14		CLEANTECH / SEMICONDUCTORS	32.91		NEWS, SEARCH AND MESSAGING	21.72	

** 1: Top sectors are based on number of investment. % is based on total amount of investment*