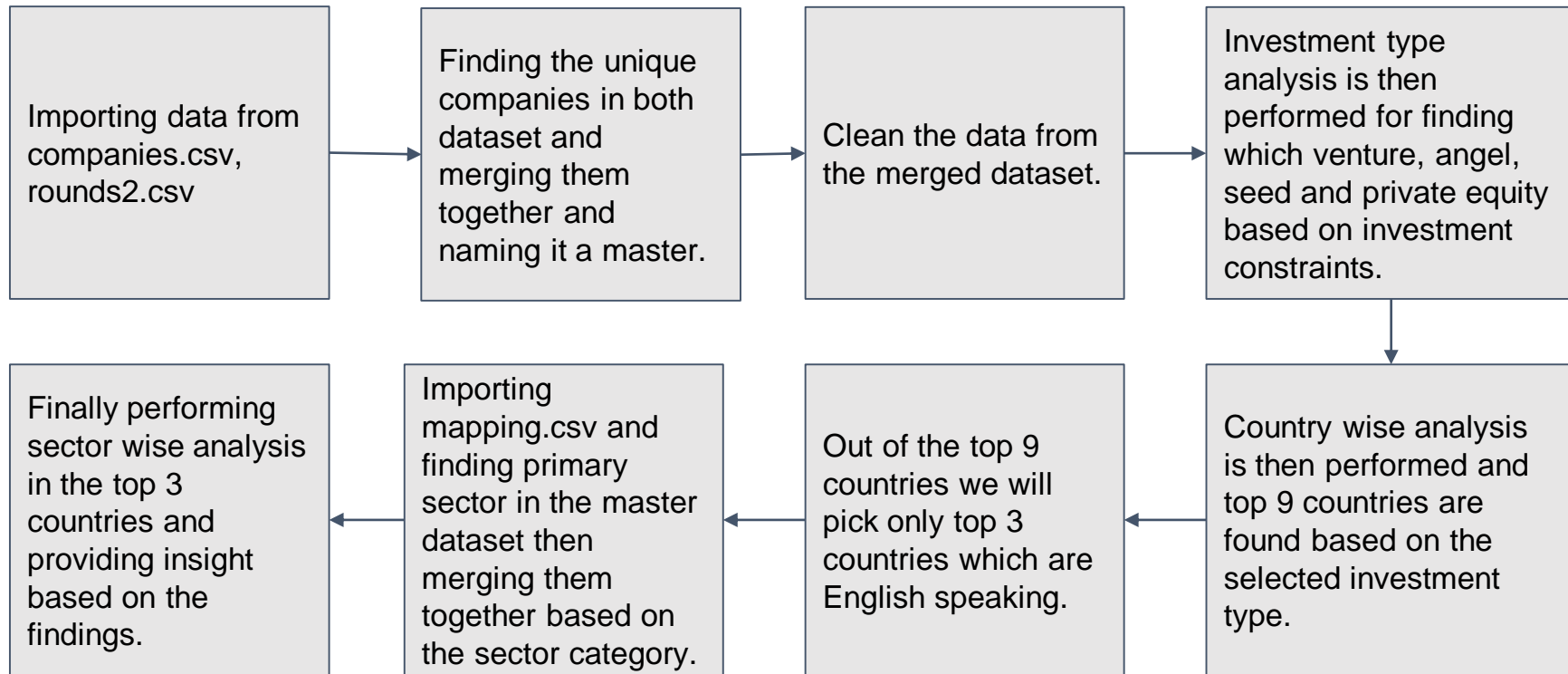# INVESTMENT ASSIGNMENT

SUBMISSION

Name: Saumya Bisht

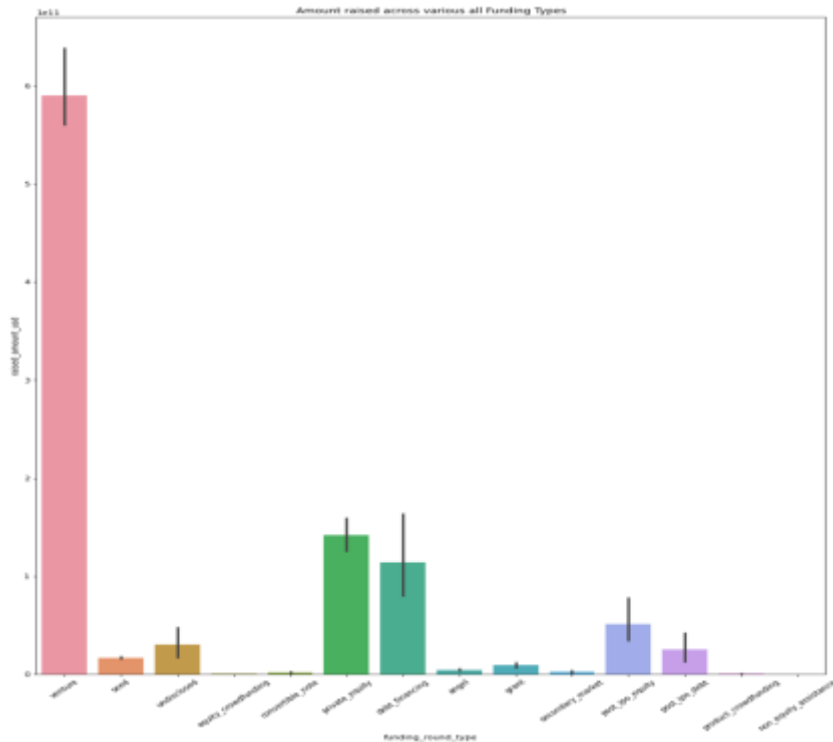# Spark Fund Case Study Analysis

- This study is for analysing the investment requirement for Spark Fund.
- We have received dataset containing the companies.csv, rounds2.csv and mapping.csv.
  - companies.csv – This dataset contains
    1. Unique Code for Company, (Primary Key)
    2. Name of the Company,
    3. Companies Homepage,
    4. Category of all Sector that the Companies deals with,
    5. Country Code.
  - rounds2.csv – This dataset contains
    1. Unique Code for Company, (Primary Key)
    2. Funding Type,
    3. Raised Amount per investment round.
  - Mapping.csv – This dataset contains
    1. Category of Primary Sectors.
- Using the given dataset we have to analyse the data based on the Business Requirement.
  - The first thing which needs to be analysed is to find which investment type is best for Spark Fund i.e. Venture, Seed, Angel or Private Equity.Also the investment type should be selected by keeping in mind that the range should be between 5 to 15 Million USD.
  - After selecting the investment type with the given constraint we have to find the top 3 countries which has raised capital in all sector. Also we have to keep in mind that these top 3 countries should be English speaking.
  - We then have to pinpoint the top performing primary sectors in these countries and provide the insight on which countries and sector provides with the best investment oppurtunities.

Problem solving methodology

Importing data from companies.csv, rounds2.csv	Finding the unique companies in both dataset and merging them together and naming it a master.	Clean the data from the merged dataset.	Investment type analysis is then performed for finding which venture, angel, seed and private equity based on investment constraints.
Finally performing sector wise analysis in the top 3 countries and providing insight based on the findings.	Importing mapping.csv and finding primary sector in the master dataset then merging them together based on the sector category.	Out of the top 9 countries we will pick only top 3 countries which are English speaking.	Country wise analysis is then performed and top 9 countries are found based on the selected investment type.

Investment Type Analysis

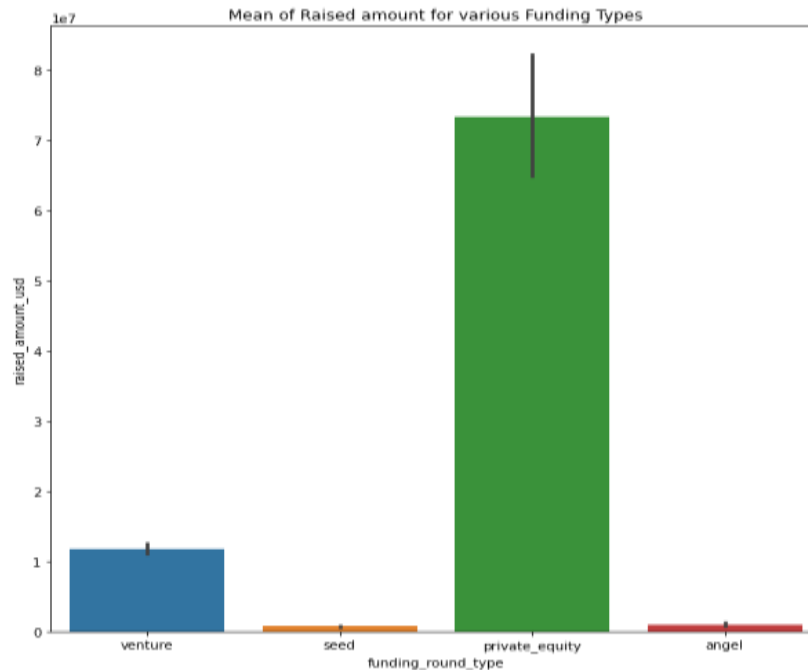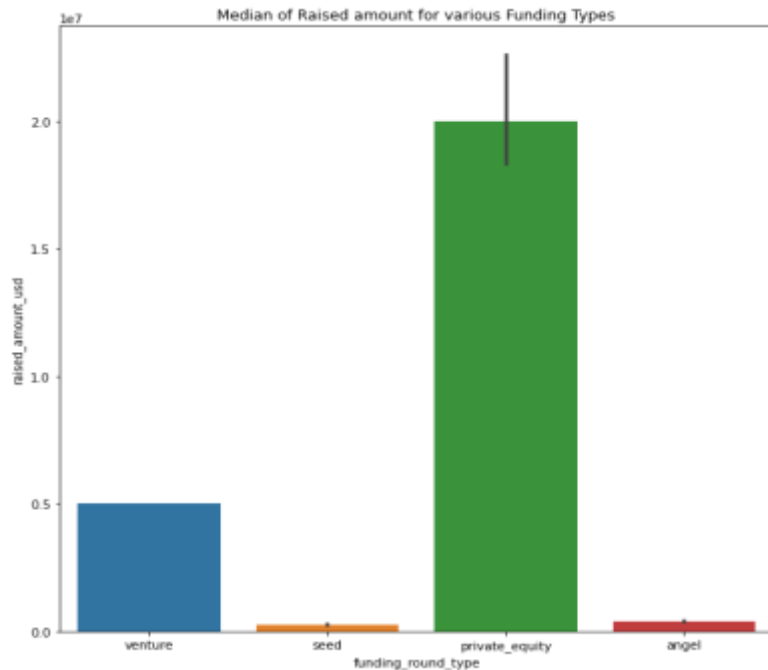Amount raised across various all Funding Types

- On the left we first see the overall investment in all the given sector and we can see the most investment is done in venture type funding.
- Now we have shortlisted the investment to venture, seed, angel and private equity and the median and mean value are as follows :-

Median

```
funding_round_type
angel               400000
private_equity    20000000
seed                275000
venture            5000000
```

Mean

```
funding_round_type
angel               958694
private_equity    73308593
seed                719818
venture           11748949
```

From the two above graph we can see that venture is the best investment type having mean and median value between 5 and 15 million USD.
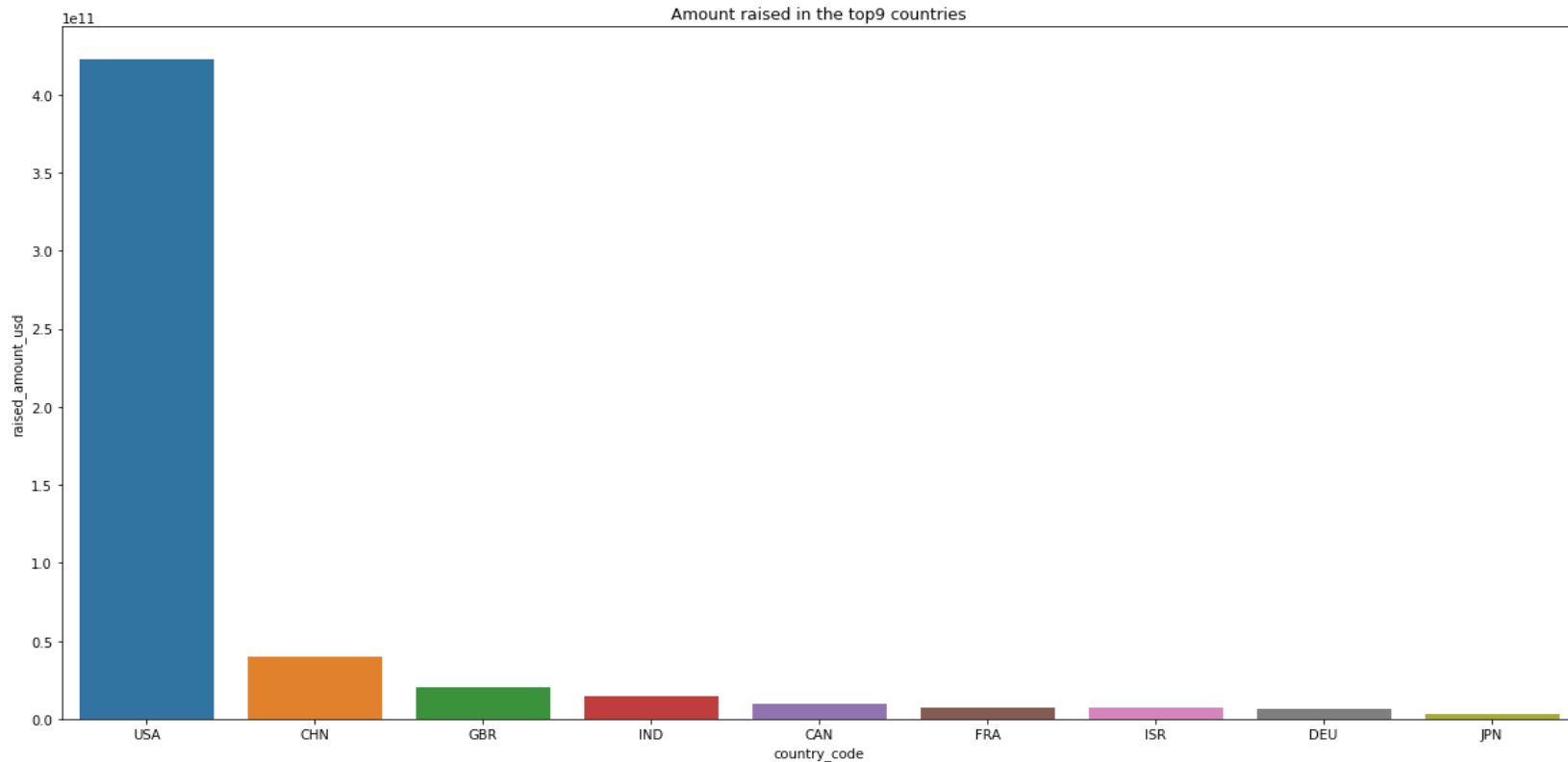
Country Wise Analysis

country_code	raised_amount_usd
USA	422510842796.00
CHN	39835418773.00
GBR	20245627416.00
IND	14391858718.00
CAN	9583332317.00
FRA	7259536732.00
ISR	6907514579.00
DEU	6346959822.00
JPN	3363676611.00

- Here we can see the top 9 countries which has received the most amount in investment for the funding type venture.
- Out of these we have to only select the countries which are English speaking as the part of business requirement.
- Thus the top 3 countries according to the requirements are :-
  1) USA - United States of America,
  2) GBR - Great Britain and
  3) IND - India.

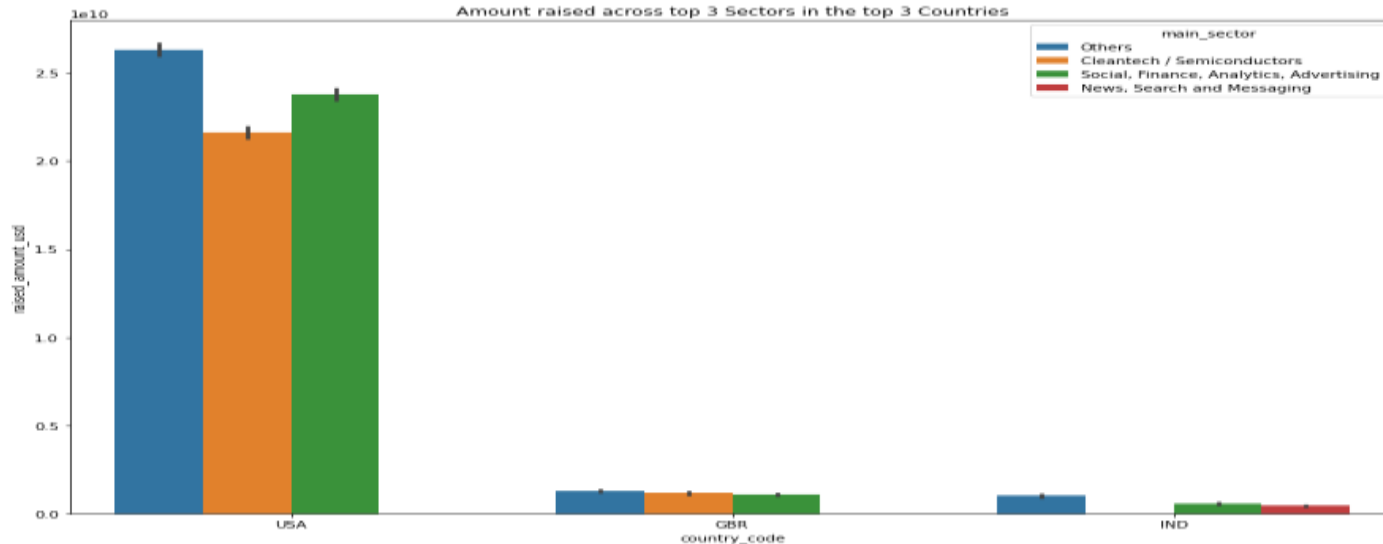Here we can see the top 9 countries who received the most funding

Amount raised in the top9 countries

Others	2950
Social, Finance, Analytics, Advertising	2714
Cleantech / Semiconductors	2350

Here we can see the top 3 Sectors in United States of America (USA) which have funding type of Venture and the amount of funding is from 5 to 15 million USD.

Others	147
Social, Finance, Analytics, Advertising	133
Cleantech / Semiconductors	130

Here we can see the top 3 Sectors in Great Britain (GBR) which have funding type of Venture and the amount of funding is from 5 to 15 million USD.

Others	110
Social, Finance, Analytics, Advertising	60
News, Search and Messaging	52

Here we can see the top 3 Sectors in Indian (IND) which have funding type of Venture and the amount of funding is from 5 to 15 million USD.

Investment sector wise in the top 3 countries

From this graph we can conclude that the top 3 sector are as follows:-

1) USA - Others, Social, Finance, Analytics, Advertising and Cleantech / Semiconductors.
2) GBR - Others, Social, Finance, Analytics, Advertising and Cleantech / Semiconductors,
3) IND - Others, Social, Finance, Analytics, Advertising and News, Search and Messaging.

From the analysis we found that :-

- The best investment type for Spark Fund will be **Venture**.

- Based on Venture the top 3 English speaking countries are **USA, GBR and IND**.

- Based on the top 3 English speaking countries the top sectors are:-

1. USA – Others, Social, Finance, Analytics, Advertising and Cleantech / Semiconductors.

2. GBR – Others, Social, Finance, Analytics, Advertising and Cleantech / Semiconductors,

3. IND - Others, Social, Finance, Analytics, Advertising and News, Search and Messaging.

Thus, Spark Fund should invest in USA, Great Britain or India in Others and Social, Finance, Analytics, Advertising sector.