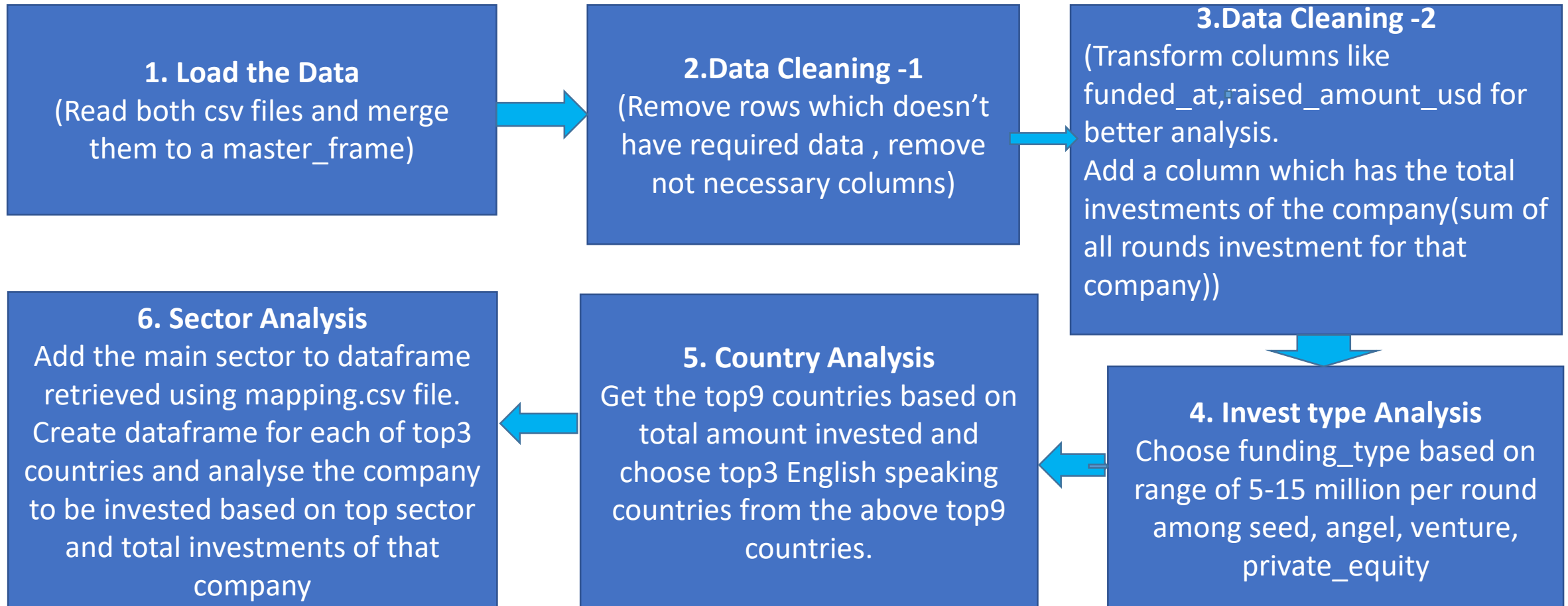# INVESTMENT ASSIGNMENT

SUBMISSION

Name: Mounica Yelchuri

Understand the global trends in investments for Spark Funds

Constraints for Spark investments:

- To invest between **5 to 15 million USD** per round of investment
- To invest only in **English-speaking countries** because of the ease of communication with the companies it would invest in.

Problem solving methodology

1. Load the Data
(Read both csv files and merge them to a master_frame)

→

2. Data Cleaning -1
(Remove rows which doesn't have required data , remove not necessary columns)

→

3. Data Cleaning -2
(Transform columns like funded_at,raised_amount_usd for better analysis.
Add a column which has the total investments of the company(sum of all rounds investment for that company))

↓

4. Invest type Analysis
Choose funding_type based on range of 5-15 million per round among seed, angel, venture, private_equity

←

5. Country Analysis
Get the top9 countries based on total amount invested and choose top3 English speaking countries from the above top9 countries.

←

6. Sector Analysis
Add the main sector to dataframe retrieved using mapping.csv file. Create dataframe for each of top3 countries and analyse the company to be invested based on top sector and total investments of that company
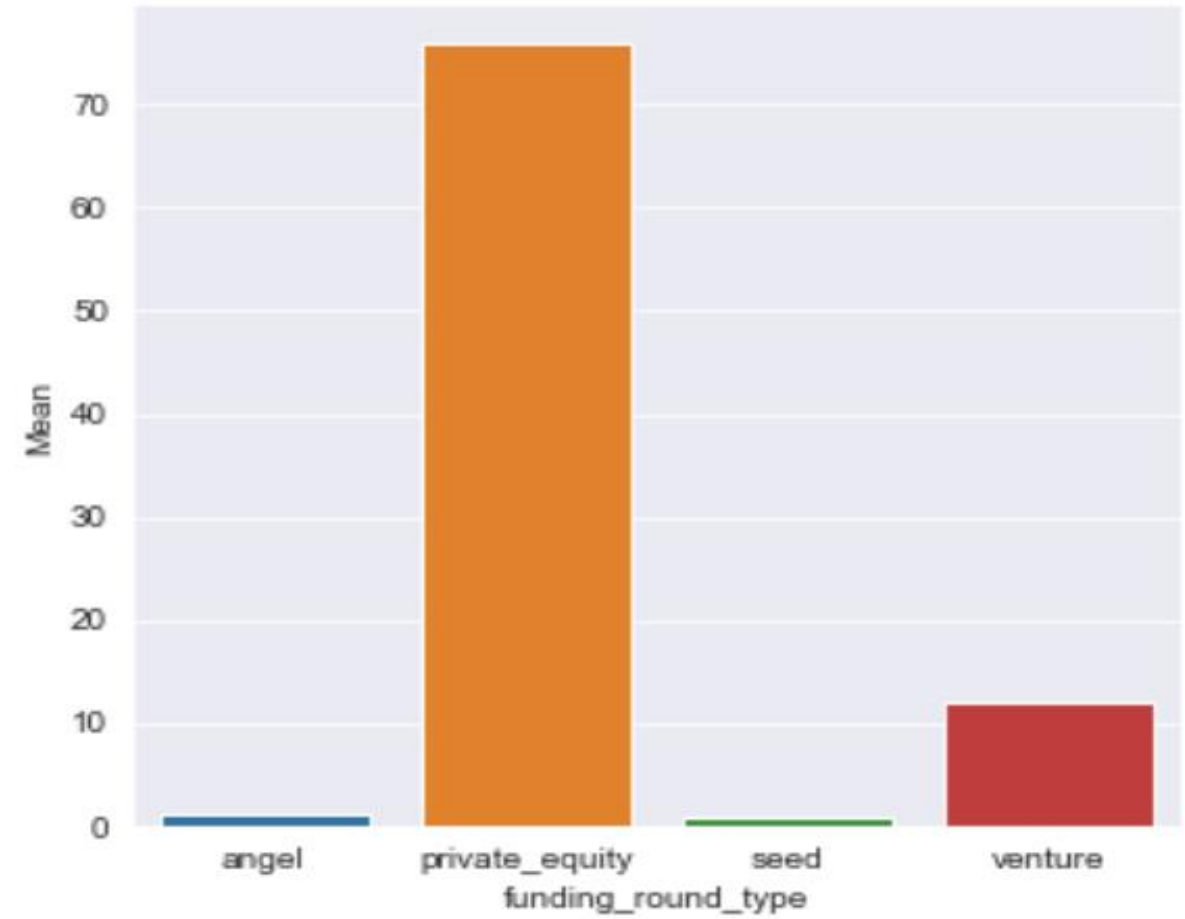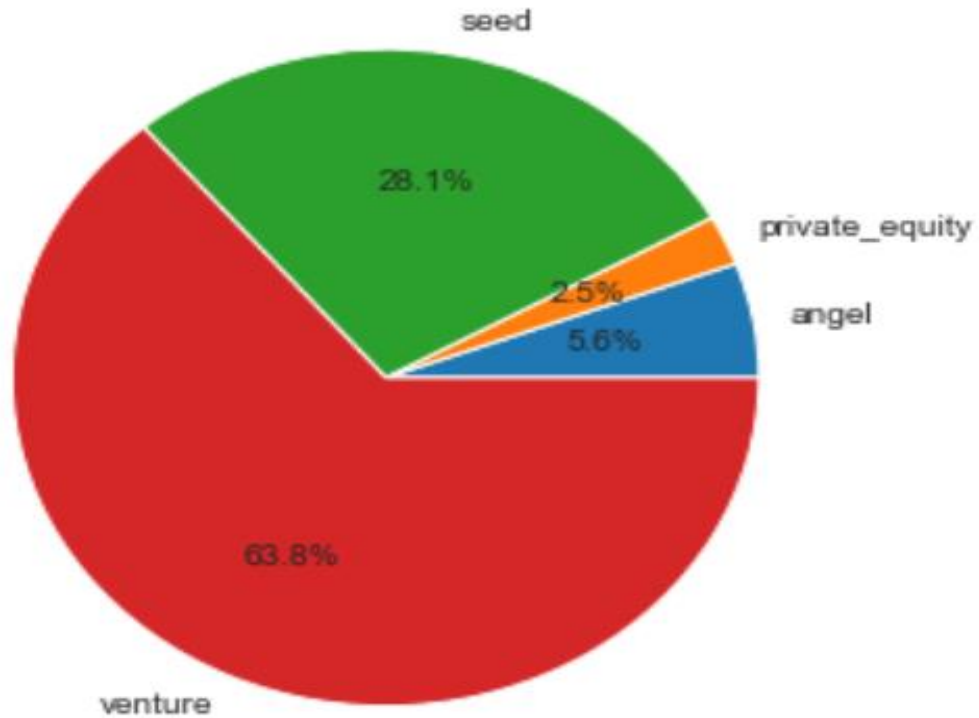
Investment Type Analysis

Approach Followed :

- Get rows having funding_type as either venture or seed or angel or private_equity

- Analyze mean, median(most representative value) and length for the four funding types

- Venture investment type matches based on the requirement(5 millions to 15 millions USD per round of investment)

- Choosen companies having their latest funding round type(based on recent funded_at date) as theVenture.(i.e If a company has both venture and private equity investments and the last fund raised was of private_equity, we are not interested in investing in these companies).
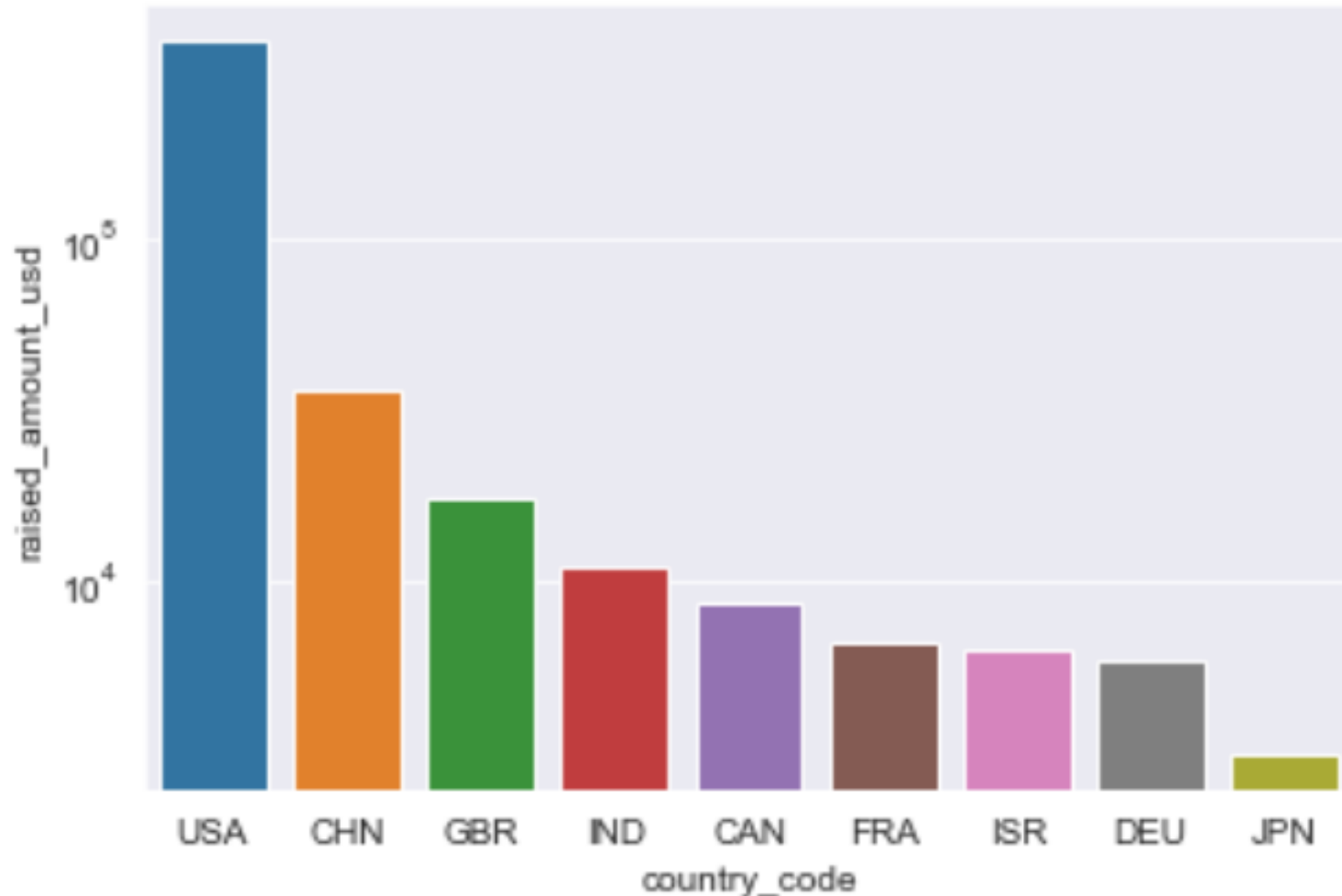
Country Analysis

Approach followed :

- Get top 9 countries based on the total investment amount a country has received

- Create a list of of english_speaking_countries from Wikipedia(link shared).

- Get top3 english speaking countries out of top9 using above list.

- Reduce dataframe to have data from these three countries.

A plot showing the top 9 countries against the total amount of investments of funding type FT. This should make the top 3 countries (Country 1, Country 2, and Country 3) very clear
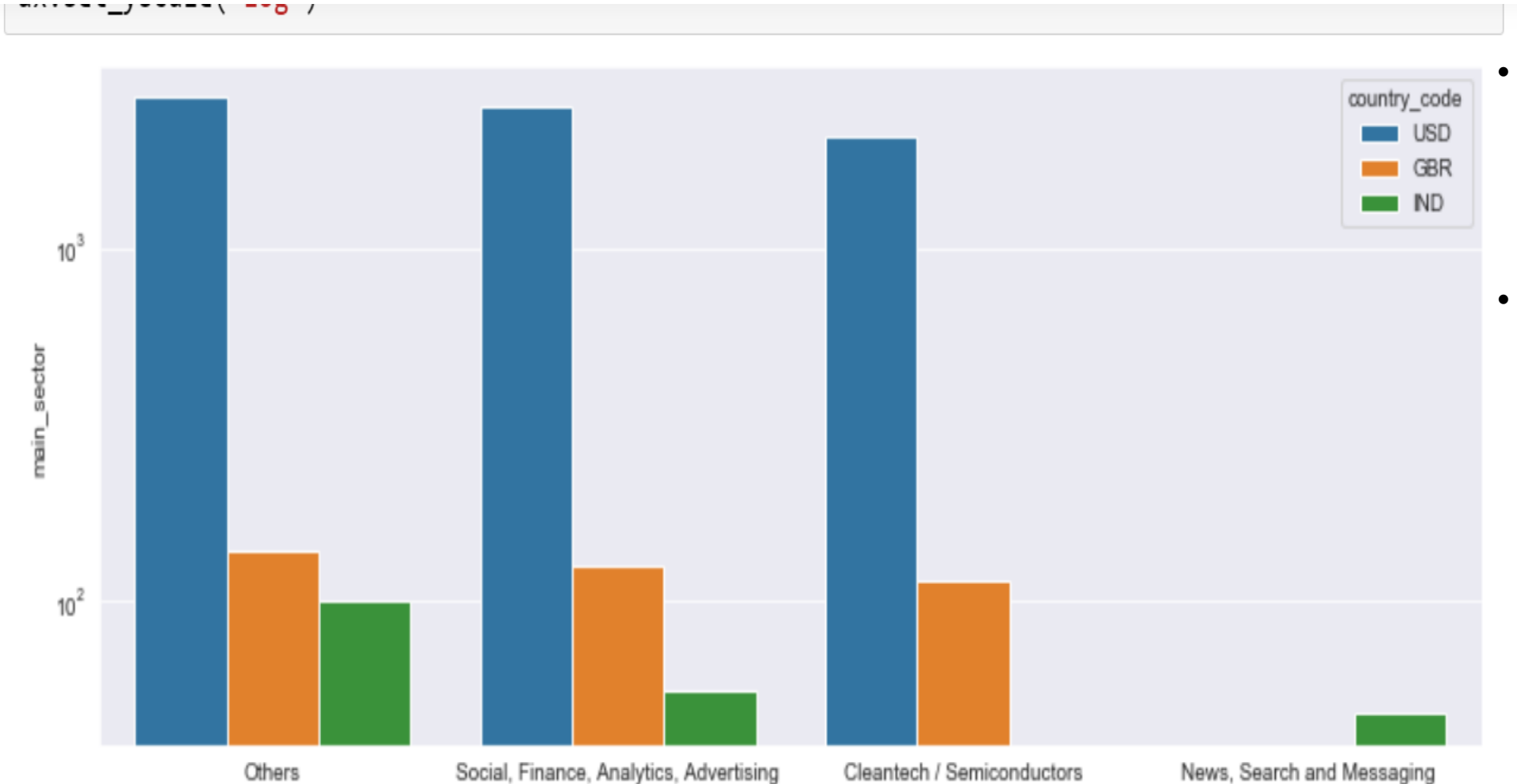

- Highly invested countries for the venture investment type are USA, China , Great Britain(GBR), India, Canada, France, Israel,Germany, Japan.

- As we are interested in top3 english speaking countries, we would be proceeding with :

  - USA
  - Great Britain
  - India

Sector Analysis

Approach Followed :

- Load mapping.csv file and remove rows having category_list as NaN.
- Drop the Blanks column from the dataframe.
- Treat category_list having 0 in their name.
- Use melt method to deduce main_sector.
- Create primary_sector in master_frame.
- Remove rows which don't have a main_sector.
- Retain rows having raised_amount_usd between 5 and 15 million (both Inclusive).
- Create D1, D2,D3 for USA, GBR, IND
- Add total number (or count) of investments for each main sector in D1, D2,D3 dataframes
- Add total amount invested in each main sector in D1, D2,D3 dataframes.

A plot showing the number of investments in the **top 3 sectors** of the **top 3 countries** on one chart

- Heavily invested sector among three countries is 'others' followed by 'Social, Finance, Analytics, Advertising'
- USA and Great Britain has third main sector as Cleantech / Semiconductors whereas in India it is 'News, Search and Messaging'.

Conclusions

United States of America (USA) , Great Britain and India would be great places to invest.

Below companies are having great amount of investments which would be ideal for Spark Funds:

Snapchat

 picoChip

 Myntra

 MediaVast

 Borro

ShopClues.com