

INVESTMENT ASSIGNMENT SUBMISSION

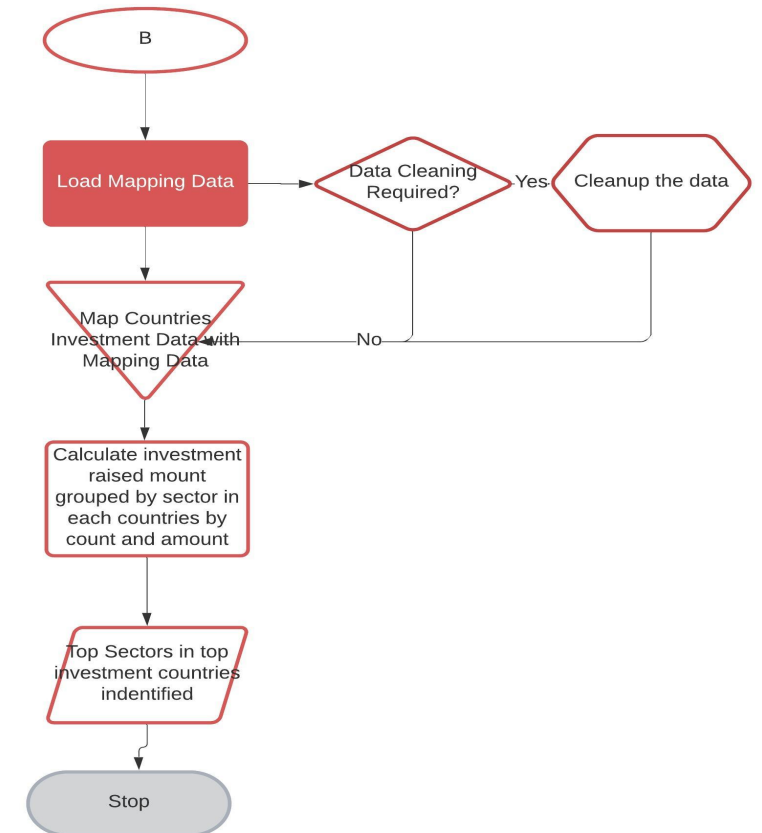
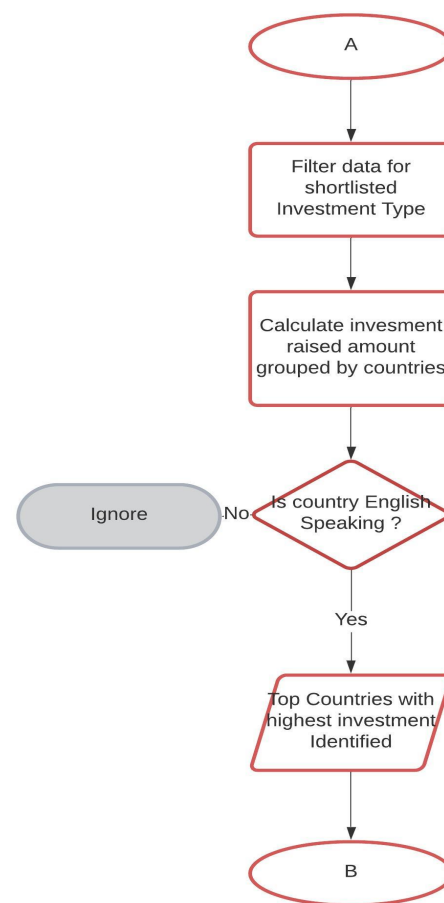
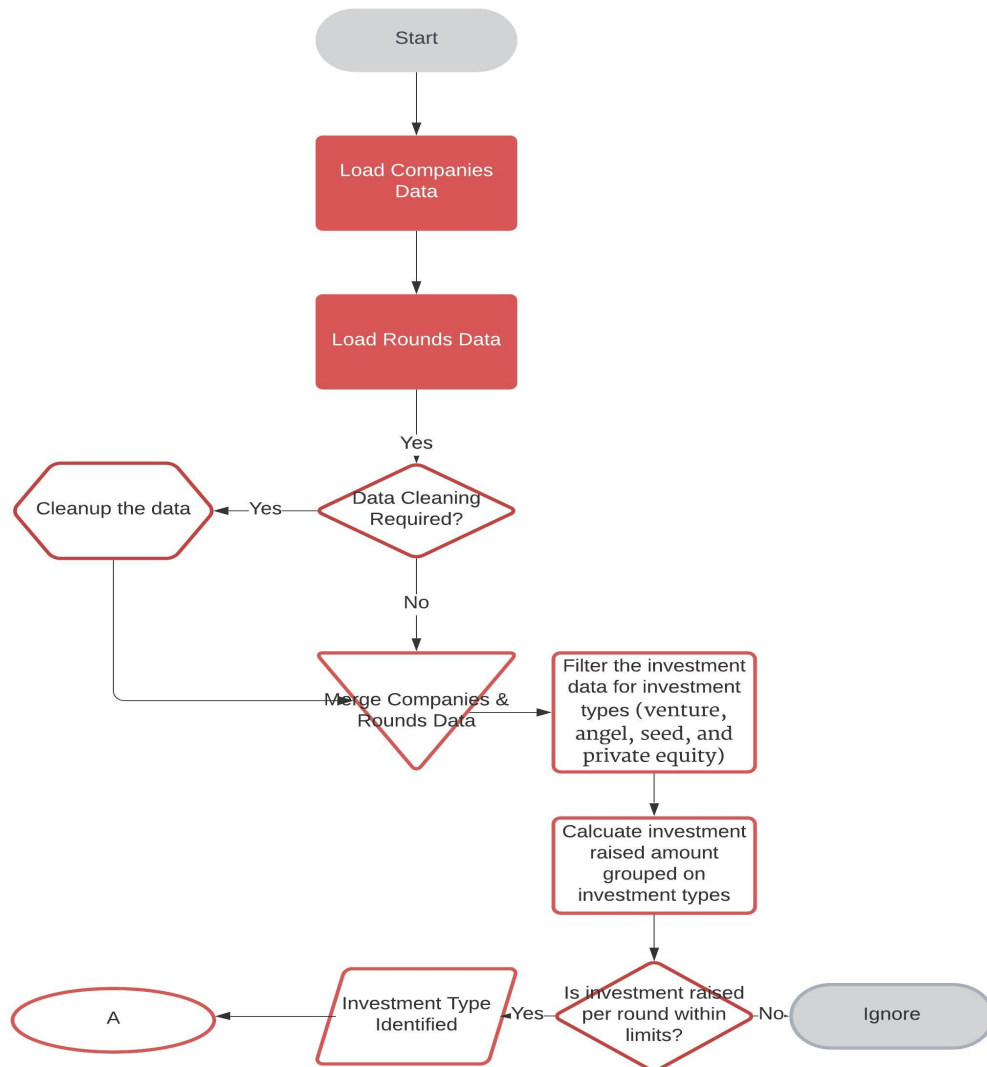
Name: Prabhat Mishra

An asset management company Spark Funds wants to make investments of 5 to 15 million USD per round of investment in companies across different sectors in different Geographies.

The objective is to identify:

1. Investment Type
2. Countries (English Speaking)
3. Sectors

for making investments based on the investments where other players are majorly investing.



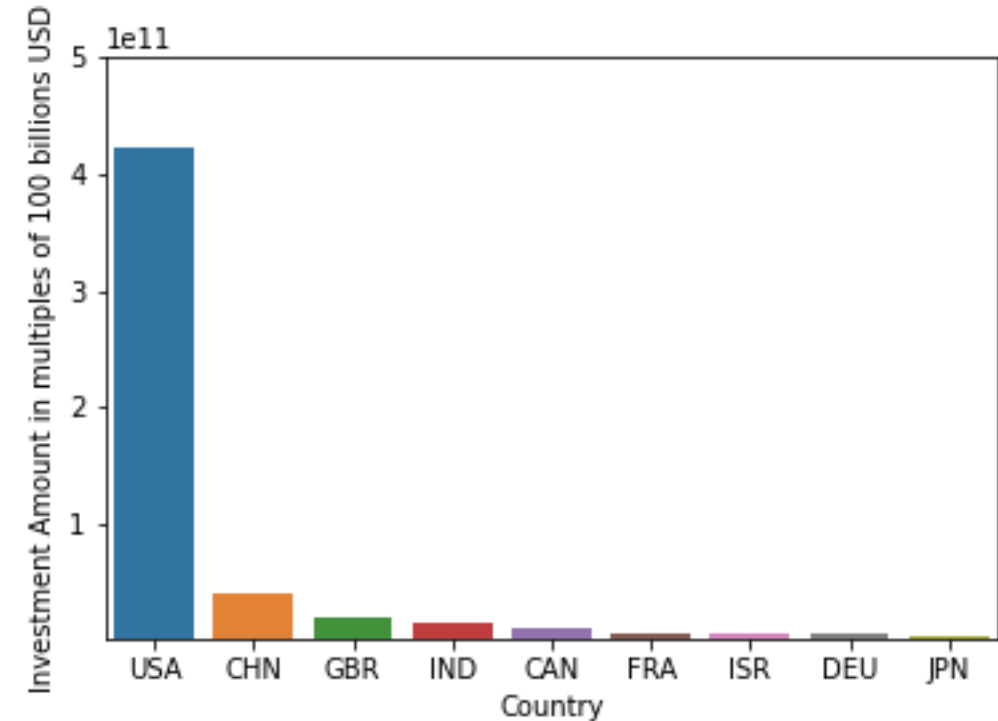
Following steps are performed for identifying Investment Type:

1. Read the companies and rounds2 data.
2. Correct the data quality issues like string manipulation, data type issues etc
3. Merge rounds2 and companies data to associate investments against companies
4. Identify if there are missing values for investment type
5. Filter data for main investment types (“angel”, “private equity”, “seed” and “venture”)
6. Plot box plot to identify the outliers
7. Calculate the most representative value of the investment amount for each of the four funding type
8. Based on the investment budget per round, best suited investment type is **“Venture”**

raised_amount_usd	
funding_round_type	
angel	400000.0
private_equity	20000000.0
seed	275000.0
venture	5000000.0

Following steps are performed for identifying top Countries suited for investment:

1. Filter the master data for shortlisted investment type – venture
2. Calculate the raised amount by each country in all the sectors
3. Plot the bar chart to identify the top countries with the highest amount of funding
4. Shortlist the countries which are English speaking ones.
5. Top English Speaking Countries are **“USA, UK and India”** with highest total investments.

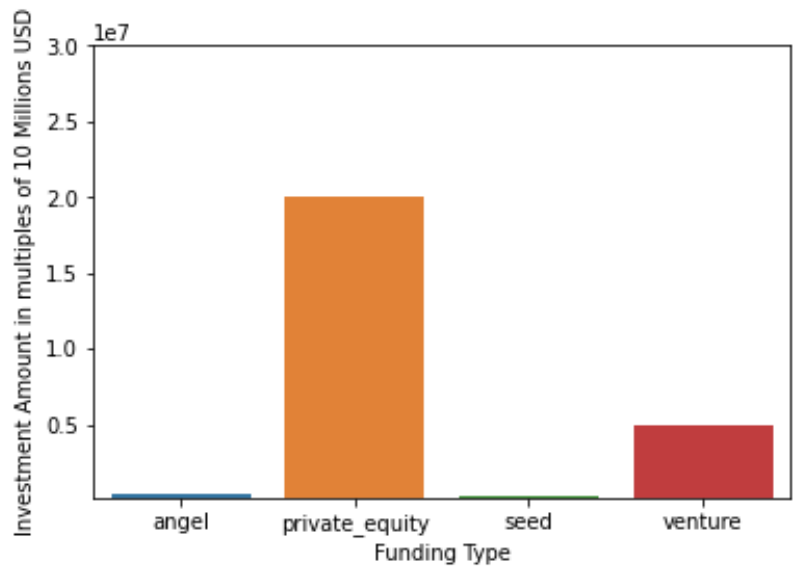


Following steps are performed for identifying top Countries suited for investment:

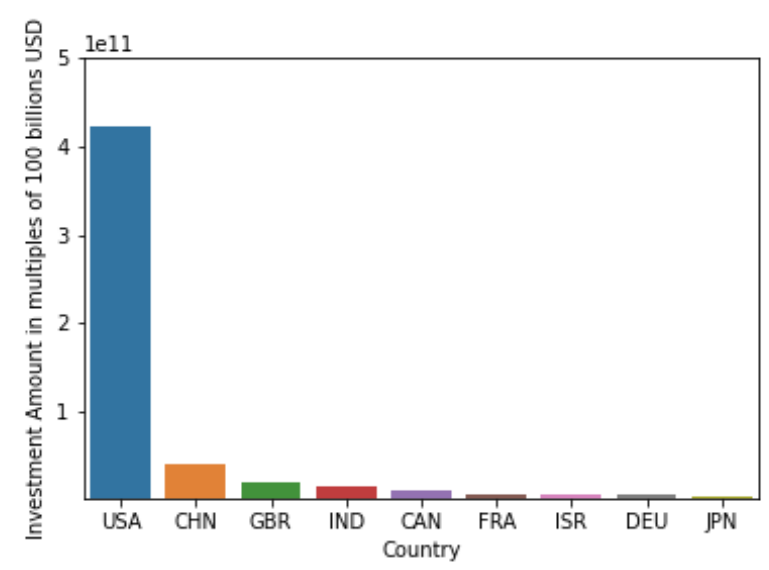
1. Rad the sector mapping sheet.
2. Correct the data quality issues like string manipulation etc.
3. Filter the master data for shortlisted investment type – venture and top 3 countries.
4. Unpivot mapping data to get sub sector and main sector information.
5. Apply Business rule decided for identifying the primary sector and main sector for each company.
6. Split the data into 3 countries
7. Calculate the total number of investments and the total amount of investments in each main sector for each of the three countries.
8. Shortlist the main sector for each countries with the highest investments.

	primary_sector	main_sector
0	Nanotechnology	Cleantech / Semiconductors
1	Natural Language Processing	Cleantech / Semiconductors
2	Natural Resources	Cleantech / Semiconductors
3	Navigation	News, Search and Messaging
4	3D	Manufacturing
5	3D Printing	Manufacturing
6	3D Technology	Manufacturing
7	Analytics	Social, Finance, Analytics, Advertising
8	Accounting	Social, Finance, Analytics, Advertising
9	Active Lifestyle	Health

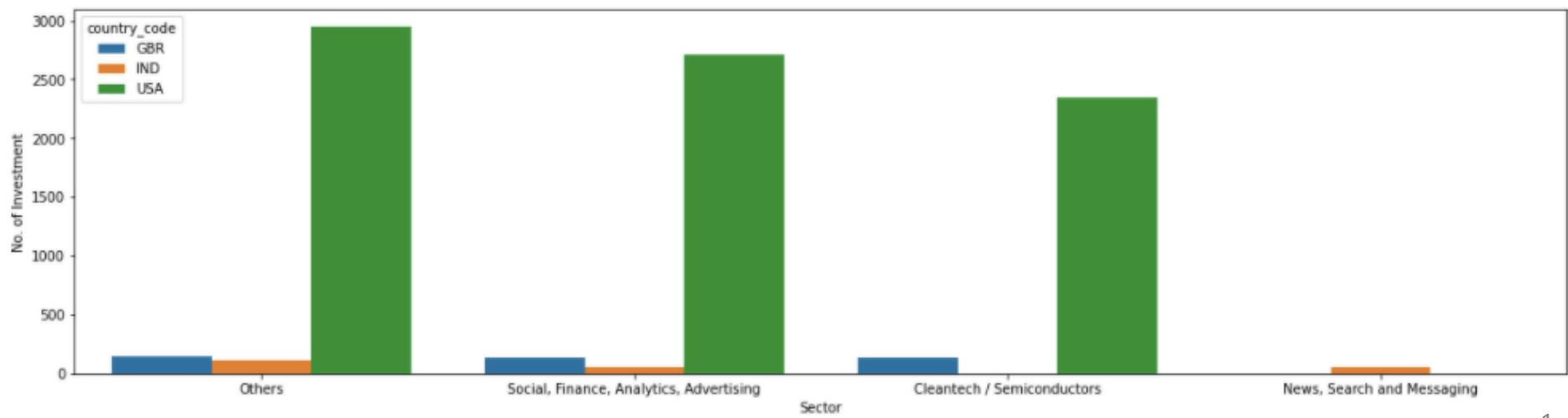
	country_code	main_sector	raised_amount_usd
0	GBR	Others	147
1	GBR	Social, Finance, Analytics, Advertising	133
2	GBR	Cleantech / Semiconductors	130
3	IND	Others	110
4	IND	Social, Finance, Analytics, Advertising	60
5	IND	News, Search and Messaging	52
6	USA	Others	2950
7	USA	Social, Finance, Analytics, Advertising	2714
8	USA	Cleantech / Semiconductors	2350



Investment Type Selection



Country for Investment



Sectored Wise Investment in selected Countries

Based on the analysis performed on the companies and investment data for each sector. Below are the suggested outcomes for Sparks Funds:

1. Investment in Venture Funds will be best suited.
2. English Speaking Countries: USA, UK and India are highest among Investment received
3. Top Sectors in highly invested companies are:
 - Others
 - Cleantech / Semiconductors
 - Social, Finance, Analytics, Advertising
 - News, Search and Messaging