INVESTMENT ASSIGNMENT

SUBMISSION

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Introduction

Abstract:

'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.
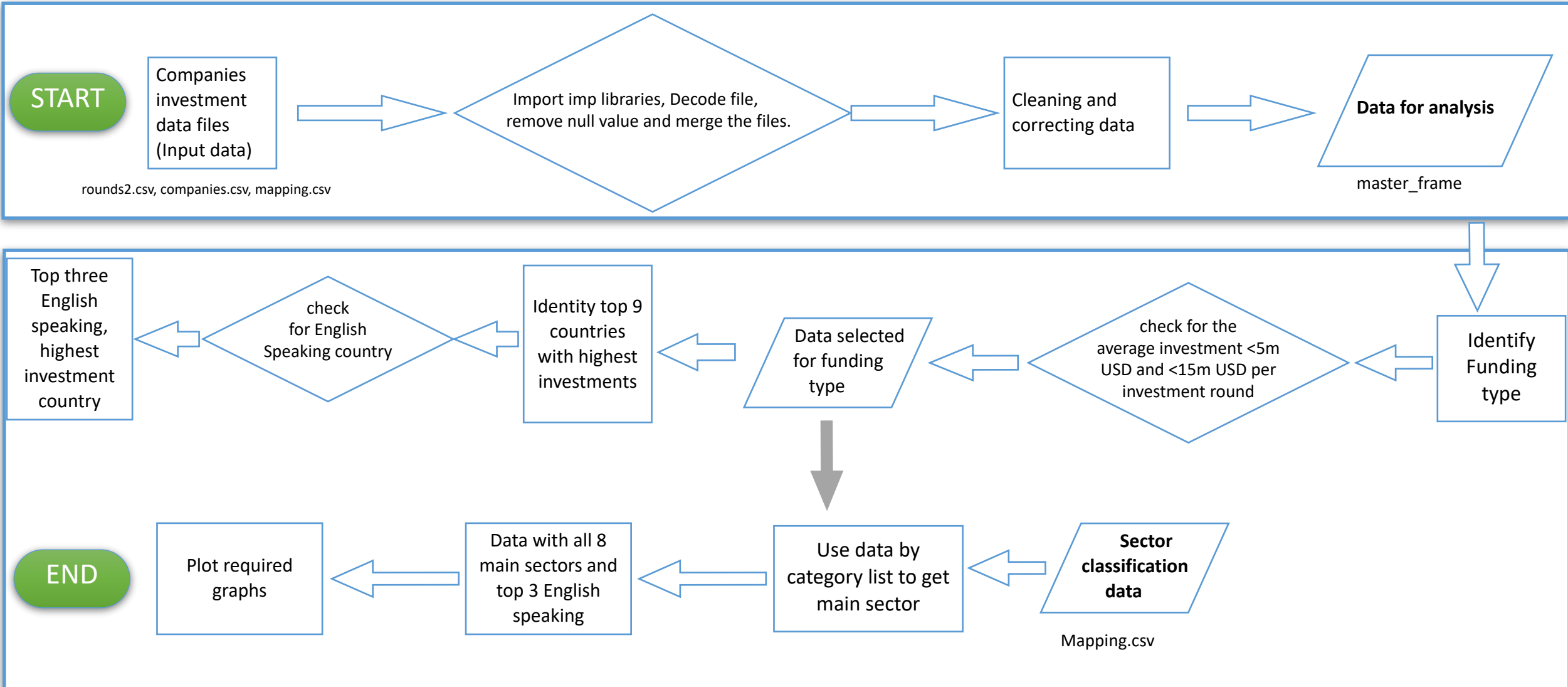
The main objective is to identify the best sectors, countries, and a suitable investment type for making investments.

Two constrain for investments:

1. It wants to invest between **5 to 15 million USD** per round of investment.

2. It wants to invest only in **English-speaking countries** because of the ease of communication with the companies it would invest in.

Data provided:

1. Companies details: 'companies.csv' have 66368 entries with 10 columns.

2. Funding round details: 'rounds2.csv' have 114949 entries with 6 columns.

3. Mapping : 'mapping.csv' have 688 entries with 10 columns.

Flow chart

START

Companies investment data files (Input data)

rounds2.csv, companies.csv, mapping.csv

Import imp libraries, Decode file, remove null value and merge the files.

Cleaning and correcting data

Data for analysis

master_frame

Identify Funding type

check for the average investment <5m USD and <15m USD per investment round

Data selected for funding type

Identity top 9 countries with highest investments

check for English Speaking country

Top three English speaking, highest investment country

Use data by category list to get main sector

Sector classification data

Mapping.csv

Data with all 8 main sectors and top 3 English speaking

Plot required graphs

END

Funding Type Analysis

1. Spark Fund wants to invest in funding type which is between 5 to 15 m USD.

2. The box plot shows the 4 different funding round type: venture, seed, private equity and angle.

3. Private equity has much higher value than 15 m USD , whereas angle and seed have much lower value.

4. So, much suitable fund is "**VENTURE**".

```
funding_round_type
private_equity    20.000
venture            5.000
angel              0.415
seed               0.300
Name: raised_amount_usd, dtype: float64
```
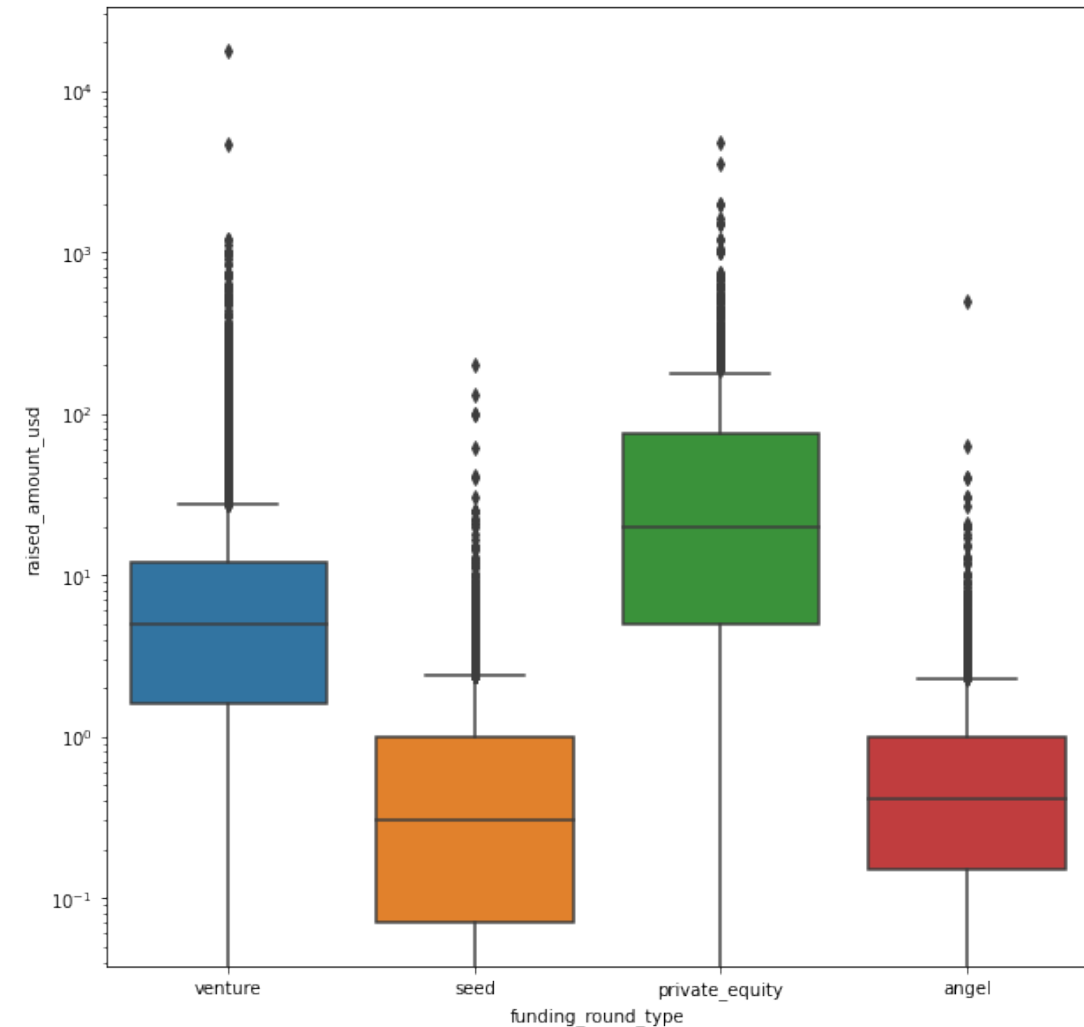
Country Analysis : Top 3 countries

Spark fund wants to invest in countries which is English speaking only.

Refer site: "https://en.wikipedia.org/wiki/
List_of_countries_and_territories_where_English_is_an_official_language"
to find top three English speaking countries.

So According to site top three English speaking countries that spark fund
should invest are: **USA, Great Britain and India.**

```
country_code
USA     420067.65
CHN      39338.79
GBR      20072.77
IND      14261.56
CAN       9482.20
FRA       7226.81
ISR       6854.34
DEU       6307.00
JPN       3167.67
Name: raised_amount_usd, dtype: float64
```
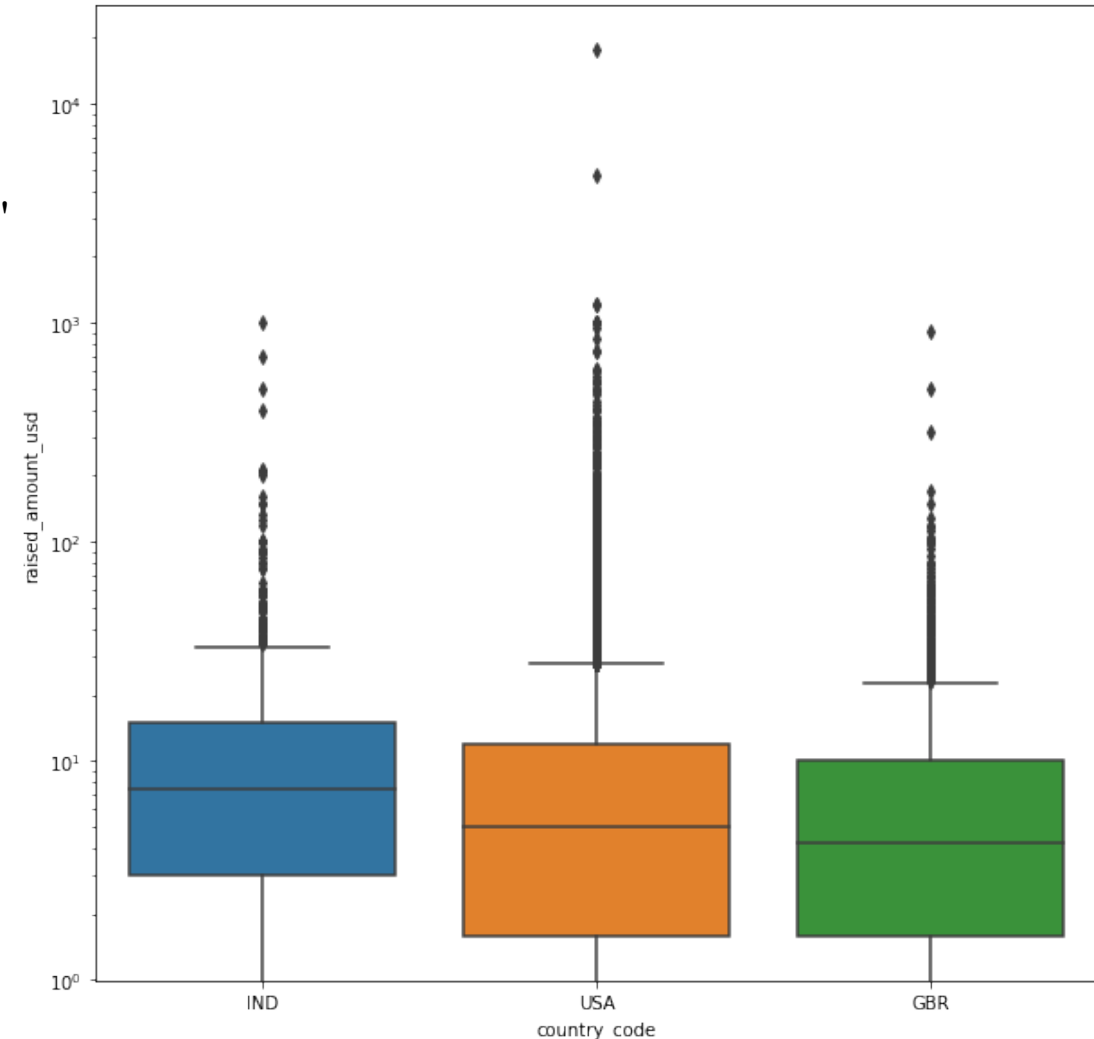
Sector Analysis

USA Top Sector Analysis

main_sector	count	sum
Automotive & Sports	167	1454.11
Cleantech / Semiconductors	2302	21226.02
Entertainment	580	5000.22
Health	913	8255.94
Manufacturing	805	7308.56
News, Search and Messaging	1567	13816.79
Others	2931	26149.28
Social, Finance, Analytics, Advertising	1916	16710.71

GBR Top sector Analysis

main_sector	count	sum
Automotive & Sports	16	167.06
Cleantech / Semiconductors	127	1136.89
Entertainment	54	461.52
Health	24	214.51
Manufacturing	42	361.95
News, Search and Messaging	73	615.75
Others	144	1264.15
Social, Finance, Analytics, Advertising	98	821.88

IND Top sector Analysis

main_sector	count	sum
Automotive & Sports	13	136.90
Cleantech / Semiconductors	20	165.38
Entertainment	33	280.83
Health	19	167.74
Manufacturing	21	200.90
News, Search and Messaging	52	433.84
Others	109	1007.41
Social, Finance, Analytics, Advertising	32	290.54

Above are the top sectors from USA , Great Britain and India.

Plot: Top sectors for countries vs Count
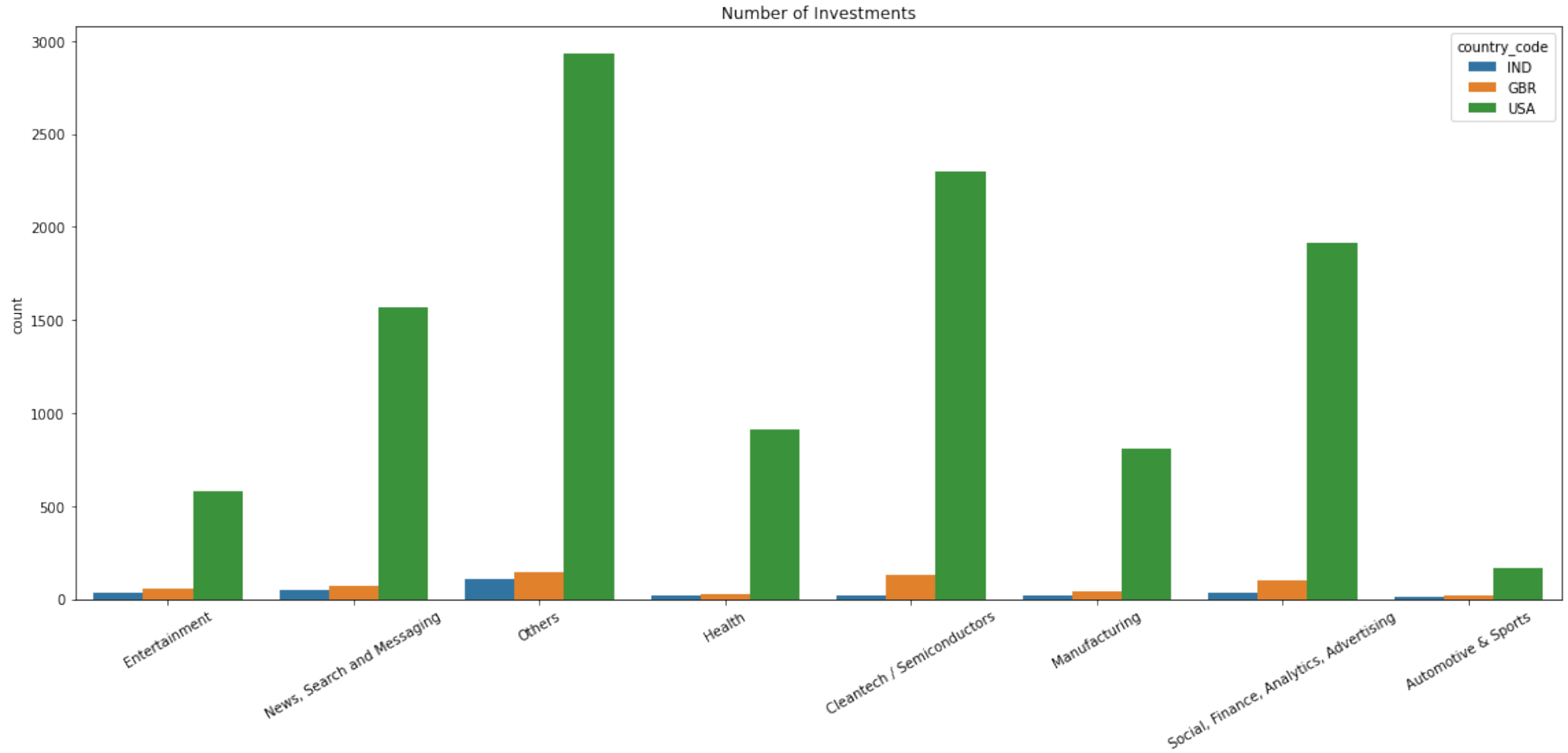
Plot: Total Invested Amount(USD) vs Main sector
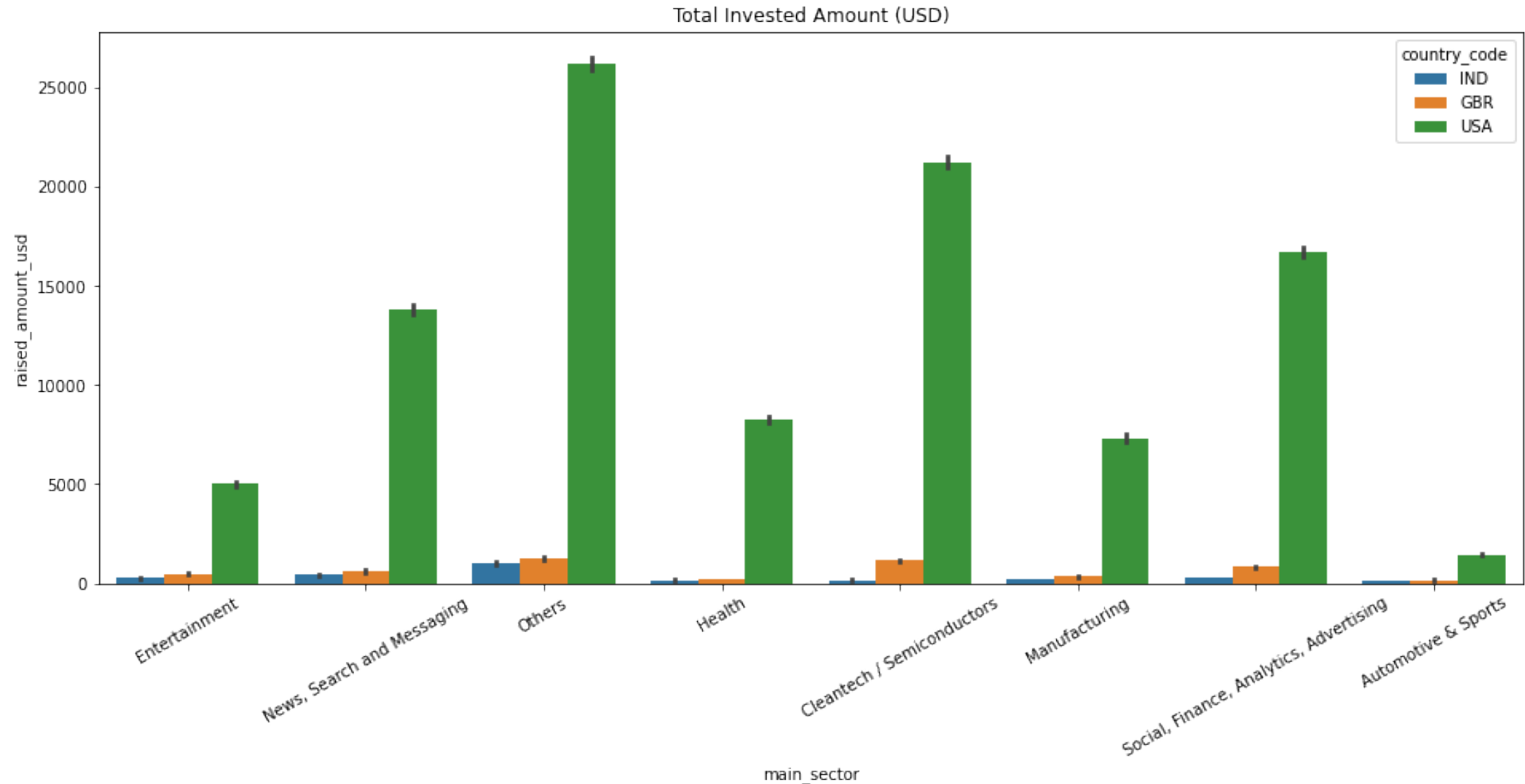
Conclusions

- Based on funding type: Spark fund will consider "Venture" funding type.

- According analysis three top English speaking countries are: USA, Great Britain and India.

- Top three country with top three sectors are:
1. **USA :** Others, Cleantech / Semiconductors and Social, Finance, Analytics, Advertising
2. **GBR :** Others , Cleantech / Semiconductors and Social, Finance, Analytics, Advertising
3. **IND :** Others, News, Search and Messaging and Entertainment