SPARK FUNDS, INVESTMENT ASSIGNMENT

SUBMISSION

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PROJECT BRIEF

Business Objectives:

Identify the best
1. Countries
2. Sectors
3. Investment type

-> Spark Funds wants to invest in where most are investing.

Goals of data analysis:

1. Investment type analysis
2. Country analyses
3. Sector Analysis

Constraints

1. Choose investment type which falls into 5 Million – 15 Million range.
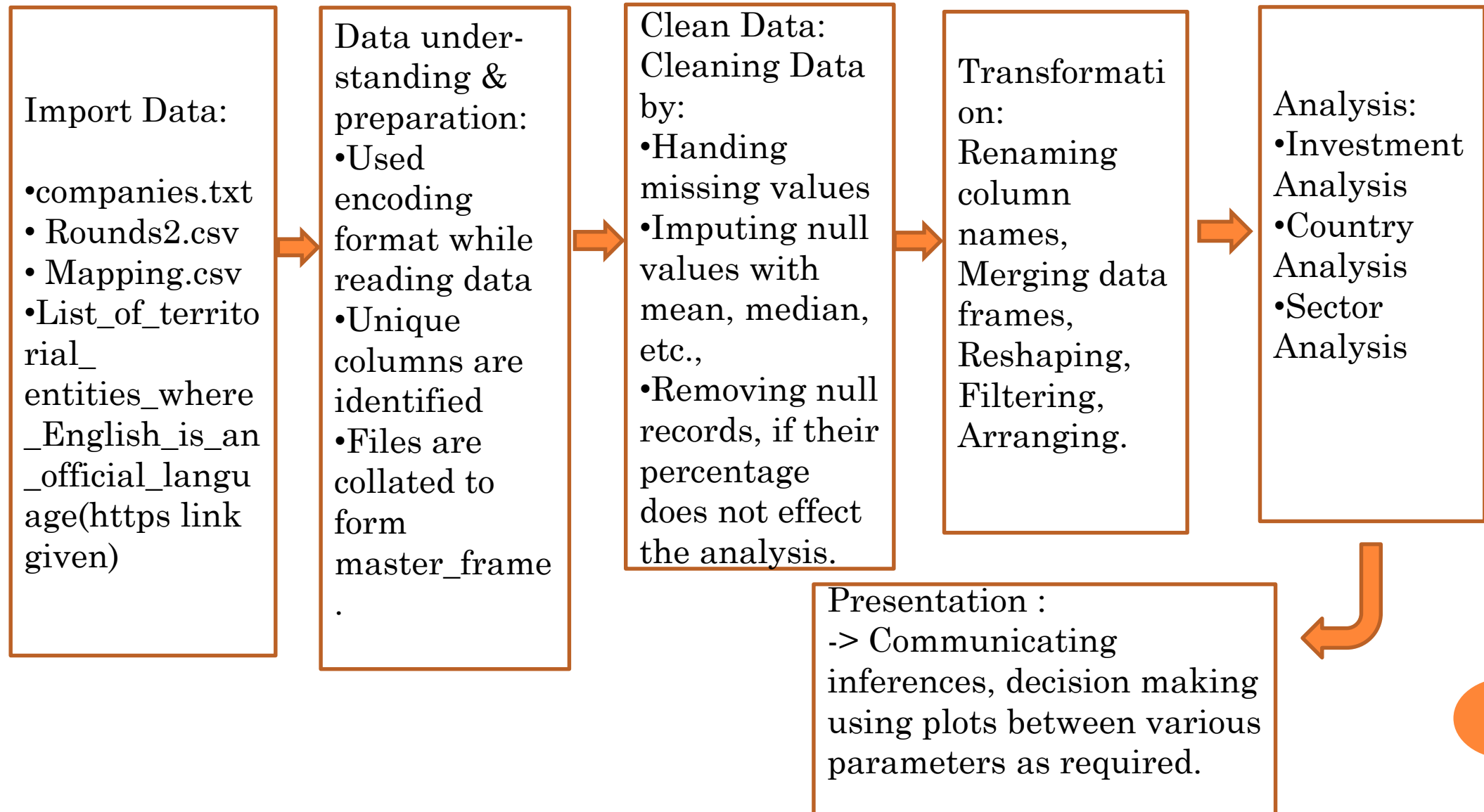2. Choose only Countries which have English as one the official Languages(For ease of business communication).

Approach

Assignment is divided into checkpoints with:
1. Investment analysis
2. Country Analysis
3. Sector analysis

PROBLEM SOLVING METHODOLOGY

Import Data:

•companies.txt
• Rounds2.csv
• Mapping.csv
•List_of_territo rial_ entities_where _English_is_an _official_langu age(https link given)

→

Data under- standing & preparation:
•Used encoding format while reading data
•Unique columns are identified
•Files are collated to form master_frame .

→

Clean Data: Cleaning Data by:
•Handing missing values
•Imputing null values with mean, median, etc.,
•Removing null records, if their percentage does not effect the analysis.

→

Transformati on: Renaming column names, Merging data frames, Reshaping, Filtering, Arranging.

→

Analysis:
•Investment Analysis
•Country Analysis
•Sector Analysis

Presentation :
-> Communicating inferences, decision making using plots between various parameters as required.

INVESTMENT TYPE ANALYSIS:

Types of Funding and No. of Investments in each funding Type:

funding_type	count_of_investments
venture	51957
seed	26438
debt_financing	6649
angel	5416
equity_crowdfunding	2970
grant	1998
private_equity	1982
convertible_note	1633
post_ipo_equity	578
product_crowdfunding	351
non_equity_assistance	136
post_ipo_debt	136
secondary_market	85
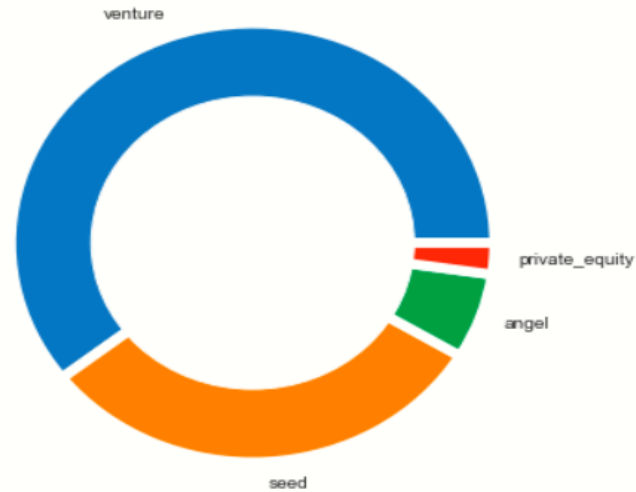

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venture         51957
seed            26438
angel            5416
private_equity   1982
Name: funding_round_type, dtype: int64
```

Pie chart showing 4 types of investments and no. Of investments made in each.

Clearly it shows that venture type of funding falls in the range of 5M - 5Million USD.

4 types of Investment and total amount invested (USD) in each

funding_round_type	amount_invested
angel	775918.120
private_equity	43460265.060
seed	657296.610
venture	10051059.070

COUNTRY ANALYSIS:

The below table is, list of top 9 country codes and total amount of investments received for venture funding type(FT)

country_code	raised_amount_usd
USA	385910006815.000
CHN	33884918773.000
GBR	19457813004.000
IND	12486508718.000
CAN	9907217668.000
ISR	7409350477.000
DEU	7401921981.000
FRA	7021851352.000
JPN	3362647127.000

We can see that out of top9 countries, three countries with English Language as Official Language are:

1.USA(United States)
2.GBR(Great Britain)
3.IND(India)

Sector Analysis:

This shows the 8 main sectors & count of Investments received respectively:
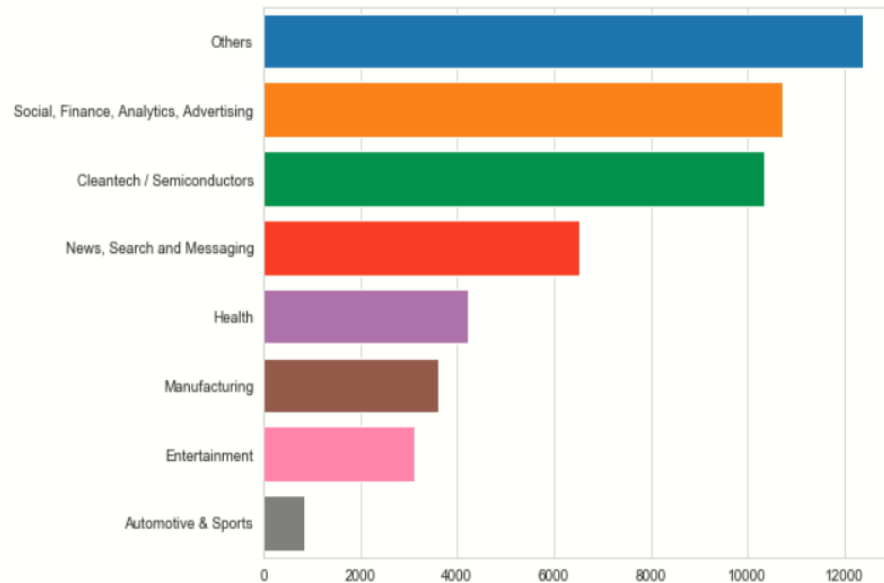

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Others                                      12393
Social, Finance, Analytics, Advertising     10722
Cleantech / Semiconductors                  10336
News, Search and Messaging                   6535
Health                                       4229
Manufacturing                                3602
Entertainment                                3108
Automotive & Sports                           830
Name: main_sector, dtype: int64
```

For country USA:

main_sector	count	sum
Automotive & Sports	228	1759104361.000
Cleantech / Semiconductors	2564	22526628192.000
Entertainment	724	5764197982.000
Health	1053	8931859357.000
Manufacturing	989	8208553378.000
News, Search and Messaging	1844	15269567428.000
Others	3403	28586007002.000
Social, Finance, Analytics, Advertising	3290	26687376964.000

For country IND:

| main_sector	count	sum
Automotive & Sports	14	141900000.000
Cleantech / Semiconductors	29	210380000.000
Entertainment	47	350830000.000
Health	33	237740000.000
Manufacturing	30	245900000.000
News, Search and Messaging	76	553834545.000
Others	158	1253409507.000
Social, Finance, Analytics, Advertising	106	780549550.000

For country GBR:

main_sector	count	sum
Automotive & Sports	26	217051565.000
Cleantech / Semiconductors	151	1265139665.000
Entertainment	80	602784687.000
Health	32	254537510.000
Manufacturing	52	411940335.000
News, Search and Messaging	97	735746235.000
Others	211	1603624289.000
Finance, Analytics, Advertising	193	1389404014.000

From this we can infer that the best sectors for investments are :
• Others
• Social, Finance, Analytics, Advertising
• Clean tech /Semiconductors
•News, Search and Messaging

fraction of total investments (globally) in angel, venture, seed, and private equity

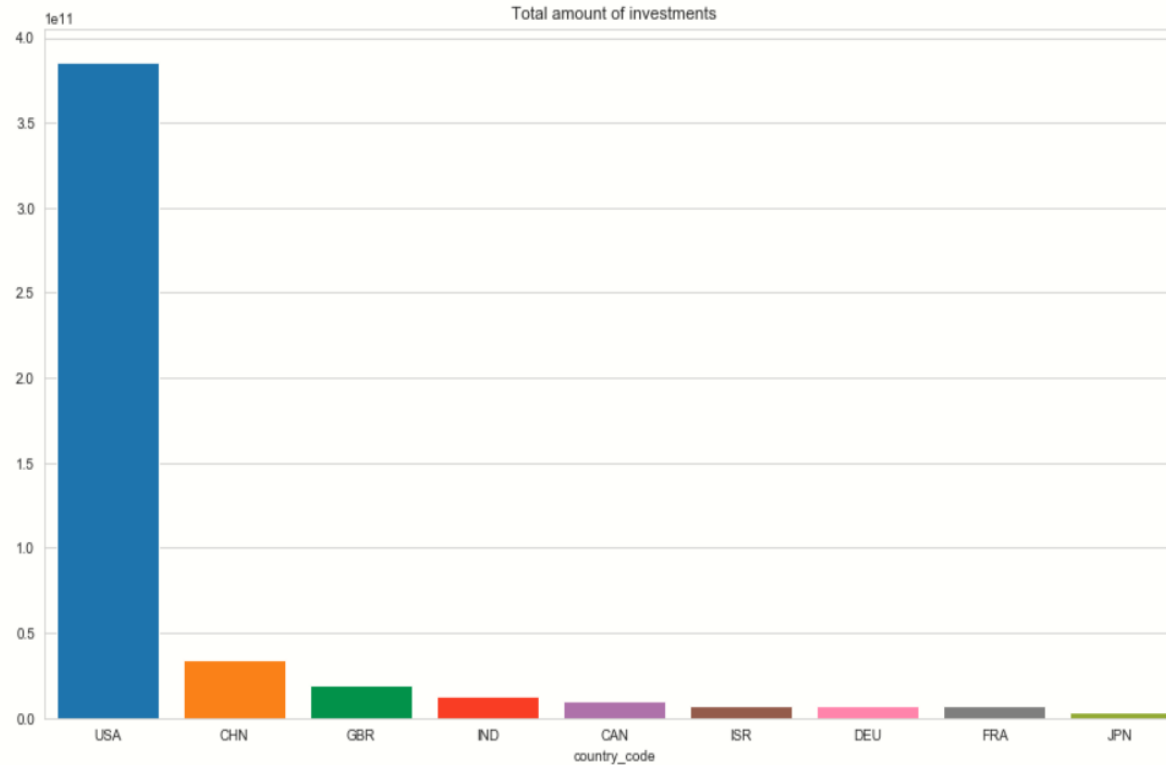Average amount of investments in angel, venture, seed, and private equity
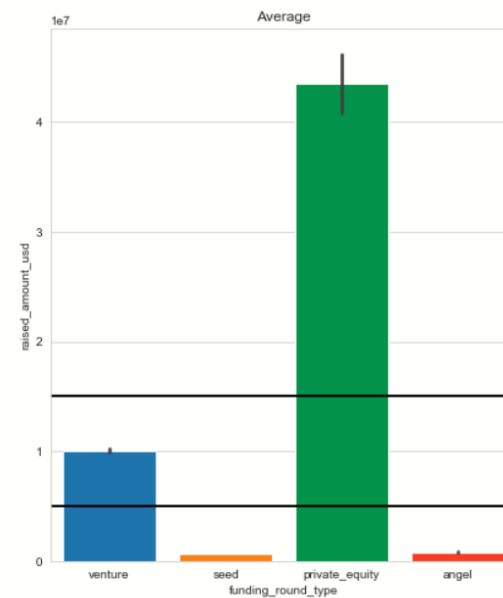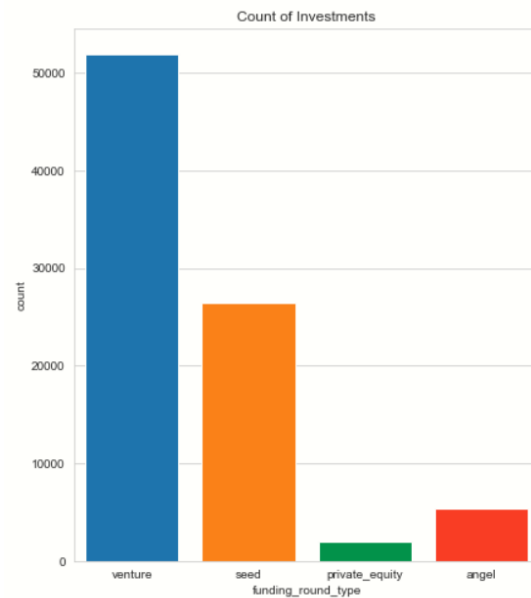
✓ Venture Funding type range falls in between 5M to 15 Million USD.
✓It has more than 70% of total investments.

Top 9 countries against the total amount of investments of Venture Funding Type(FT)

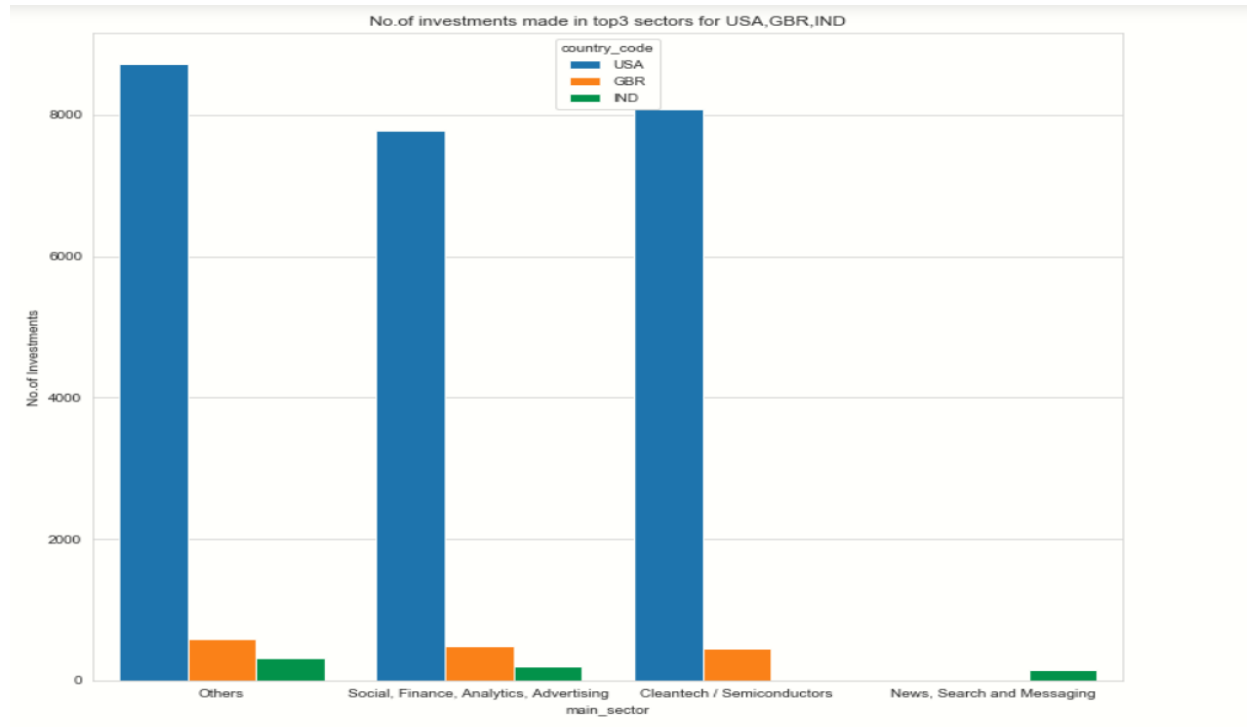Top 3 English Speaking invested countries by Venture Fund Type:
➢ USA
➢ GBR
➢ IND

No.of investments made in top3 sectors for USA,GBR,IND

The view is filtered on country_code, sectors. The country_code filter is for USA,GBR,IND & the sector wise filter is for Others, social Finance Analytics, Clean tech / Semiconductors & News, Search, Messaging.

CONCLUSIONS

❖ **Based on the two Constraints given by the Spark Funds CEO :**
  - Choose investment type which falls into 5 Million – 15 Million range.
  - Choose only Countries which have English as one the official Languages(For ease of business communication).

❖**The Funding Investment Type which is most suited for Spark Funds needs is**
  - VENTURE

❖ **The top 3 English Speaking countries to invest are:**
  - USA
  - GBR
  - IND

❖ **The top sectors to invest are :**
  - Others / Social, Finance, Analytics, Advertising / Clean tech /Semiconductors for USA & Great Britain
  - Others / Social, Finance, Analytics, Advertising / News, Search and Messaging for India.