

INVESTMENT ASSIGNMENT

SUBMISSION

Name: Arunkumar

Spark Funds - Investment Analysis

- Wants to invest between **5 to 15 Million USD per round of Investment**
- Wants to invest **only in English-speaking countries** (consider a country to be English speaking **only if English is one of the official languages in that country**)
- **List of countries** where English is official language in the country - https://en.wikipedia.org/wiki/List_of_countries_and_territories_where_English_is_an_official_language

Strategy for Investment

Spark Funds wants to **invest where most other investors are investing**

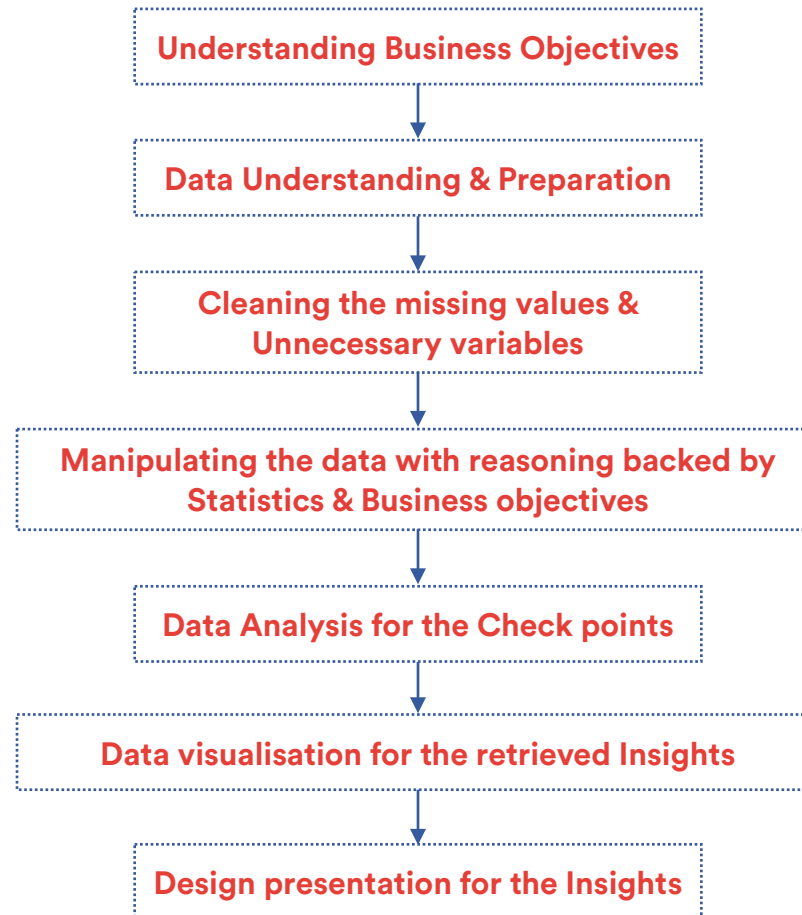
Business Objective

1. Identify **best sector, countries, and a suitable investment type** for making investments
2. Overall strategy is to invest where others are investing

Goals of data analysis

1. Investment type analysis - Comparing the typical investment amounts in the venture, seed, angel, private equity
2. Country analysis - Heavily invested in the past
3. Sector analysis - Distribution of investments across the 8 main sectors - mapped to category list(primary sector) in mapping.csv file

Problem solving methodology - Flow chart



Analysis - Data Cleaning

'funding_round_code' - 72% of missing values - can't impute large amount of missing values. so, Delete column

'permalink' - company_permalink & permalink has same information. So we can delete one of the column. Let's delete permalink

'homepage_url' - 5% of missing values - Not an important information for this analysis. so, Delete column

'state_code' - 9% of missing values - Not an important information for this analysis. so, Delete column

'region' - 9% of missing values - Not an important information for this analysis. so, Delete column

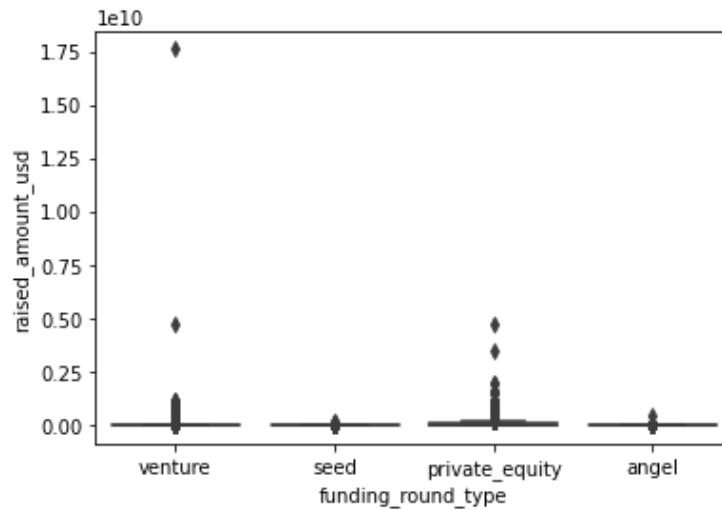
'city' - 9% of missing values - Not an important information for this analysis. so, Delete column

'founded_at' - 18% of missing values - Not an important information for this analysis. so, Delete column

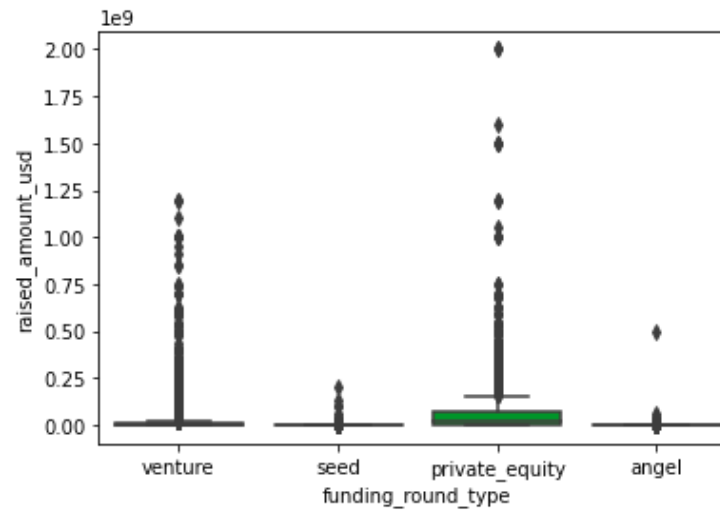
'category_list' - 2% of missing values - Since we don't clearly know the right category of these investments very small %of observation. so, Delete rows

'country_code' - 6% of missing values - Imputing the country code with 'mode' will skew the data. so, Delete rows

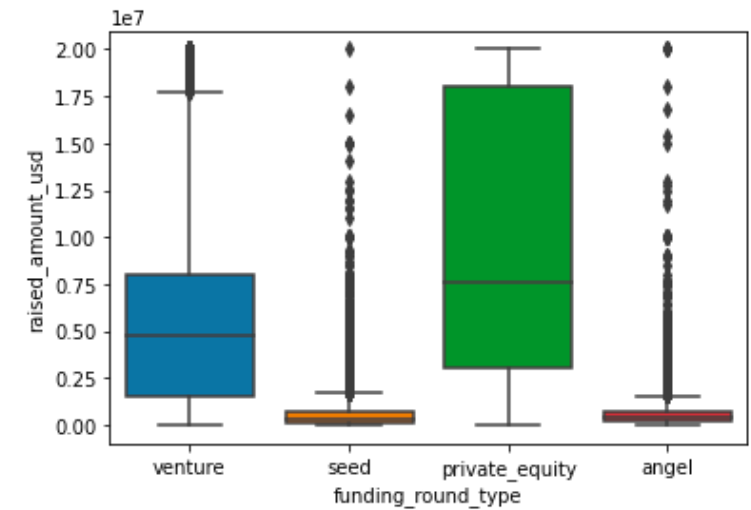
Outlier analysis for this four funding type



raised_amount_usd is heavily skewed by the outliers. So, let's boxplot only for raised_amount_usd less than 2000000000 (2 Billion)



Still, the box plot is heavily skewed by the outliers. So, let's boxplot only for raised_amount_usd less than 20000000(20Million)

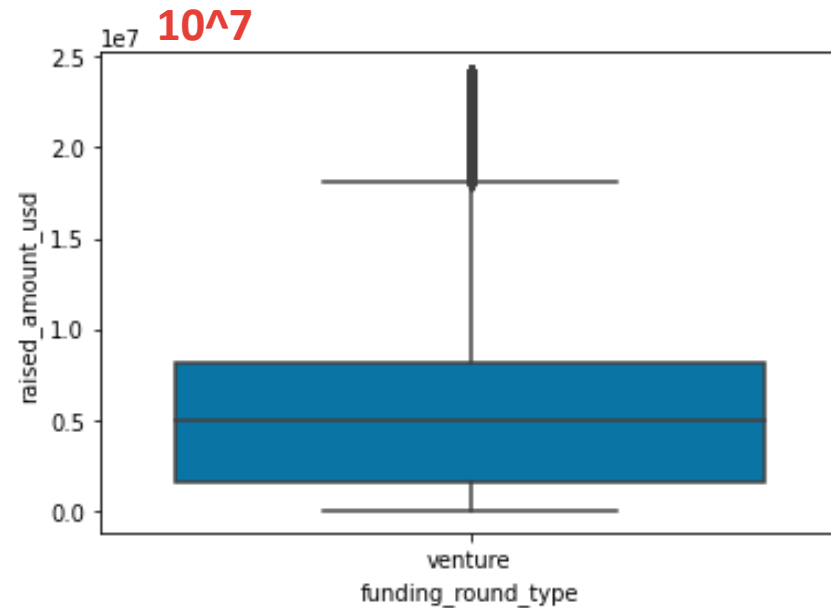


75th percentile of Angel & Seed funding type is only in Lakhs (770000.00 & 750000.00 respectively). Spark Funds wants to invest between 5M to 15M. So, let's omit these two funding types

Representative funding type Analysis

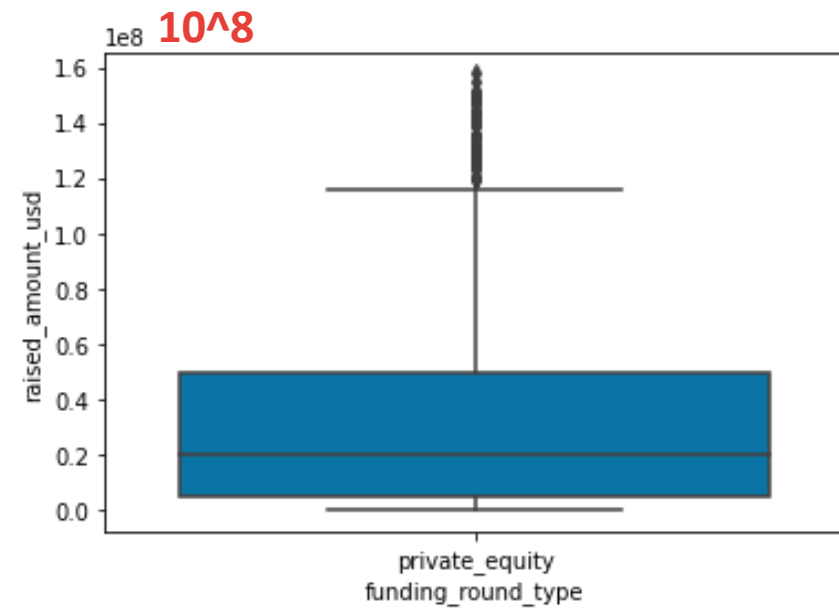
From 45th to 80th percentile, More than 37% of the funding in venture funding type is between 5Million to 15Million USD (After removing Outliers)

median = 5Million



From 21st to 40th percentile, Only 19% of the funding in Private Equity is between 5Million to 15Million USD (After removing Outliers)

median = 20Million

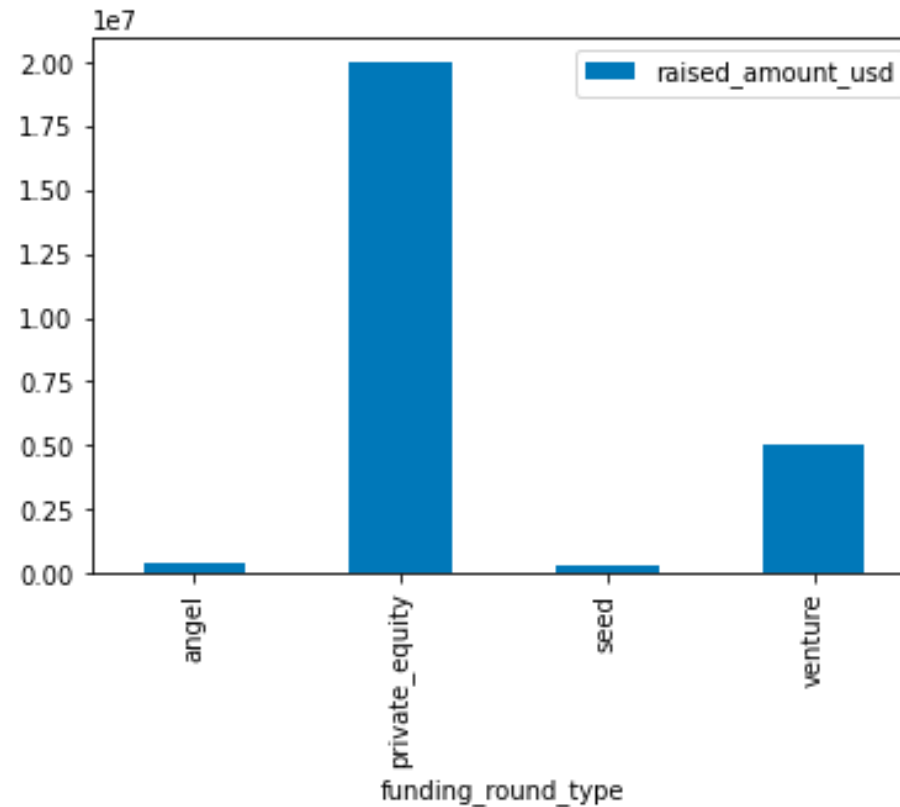


Considering that Spark Funds wants to invest between 5 to 15 million USD per investment round and above analysis, Venture Funding round type would be right fit for them

Plot 1

Representative amount of investment in each funding type

Considering that Spark Funds wants to invest between **5 to 15 million USD per investment round** and above analysis, **Venture Funding round type** would be right fit for them.

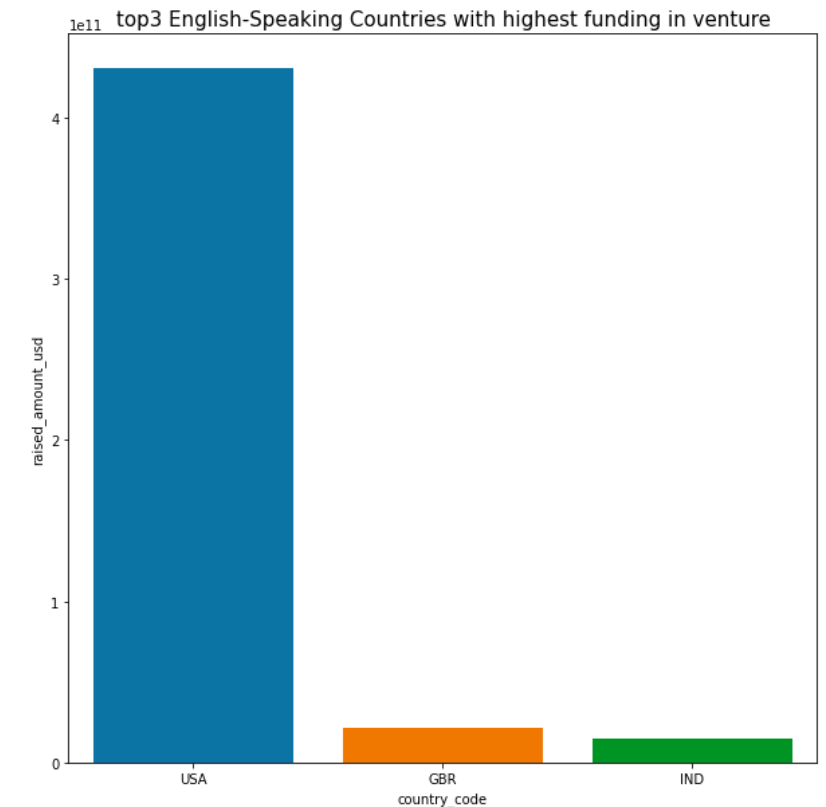
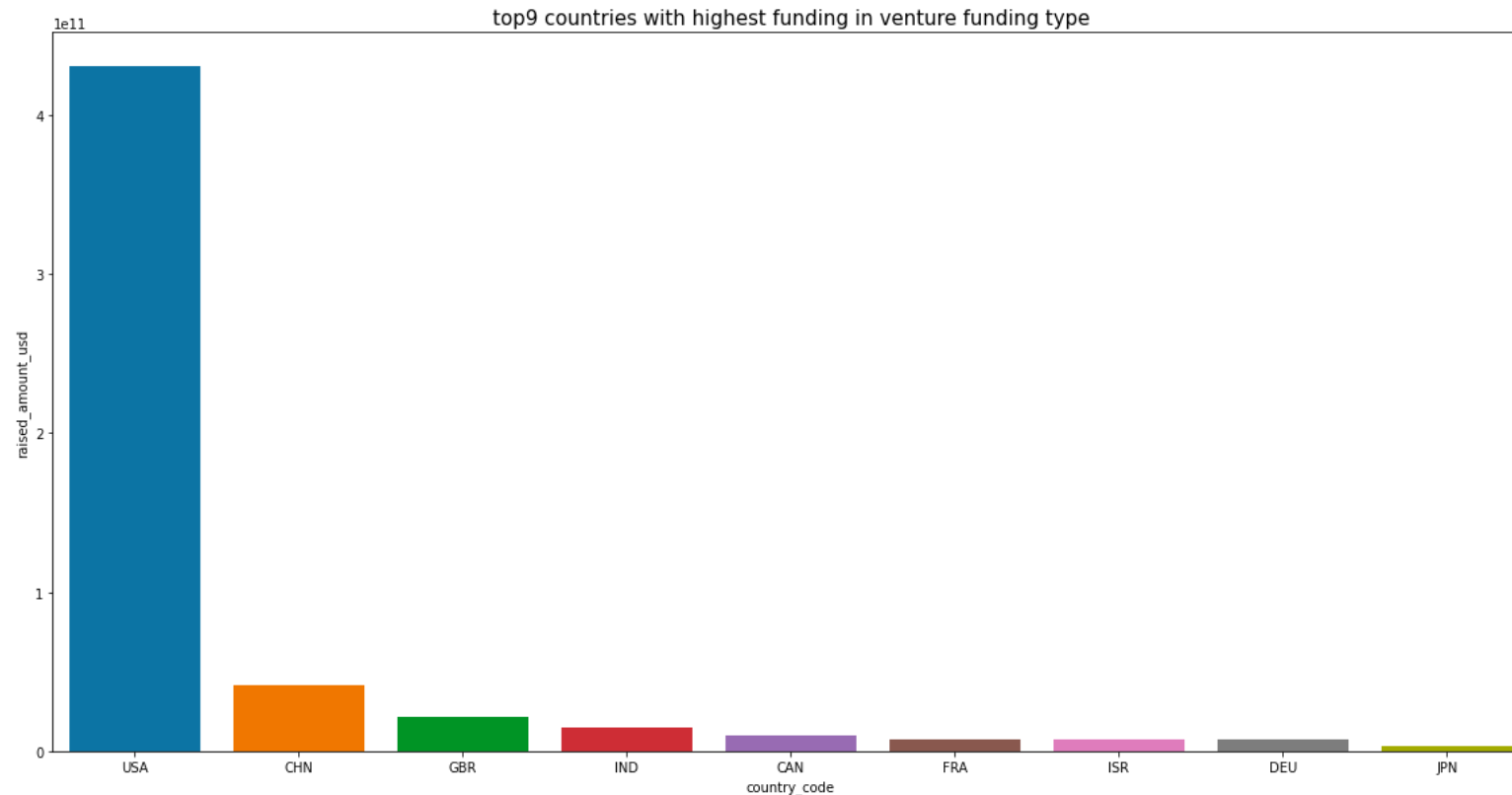


Mean values are heavily skewed by the Outliers. So, its better to take Median as a representative values of Investments for Each of these Funding Types

Total amount of investments received by Countries in Venture funding type

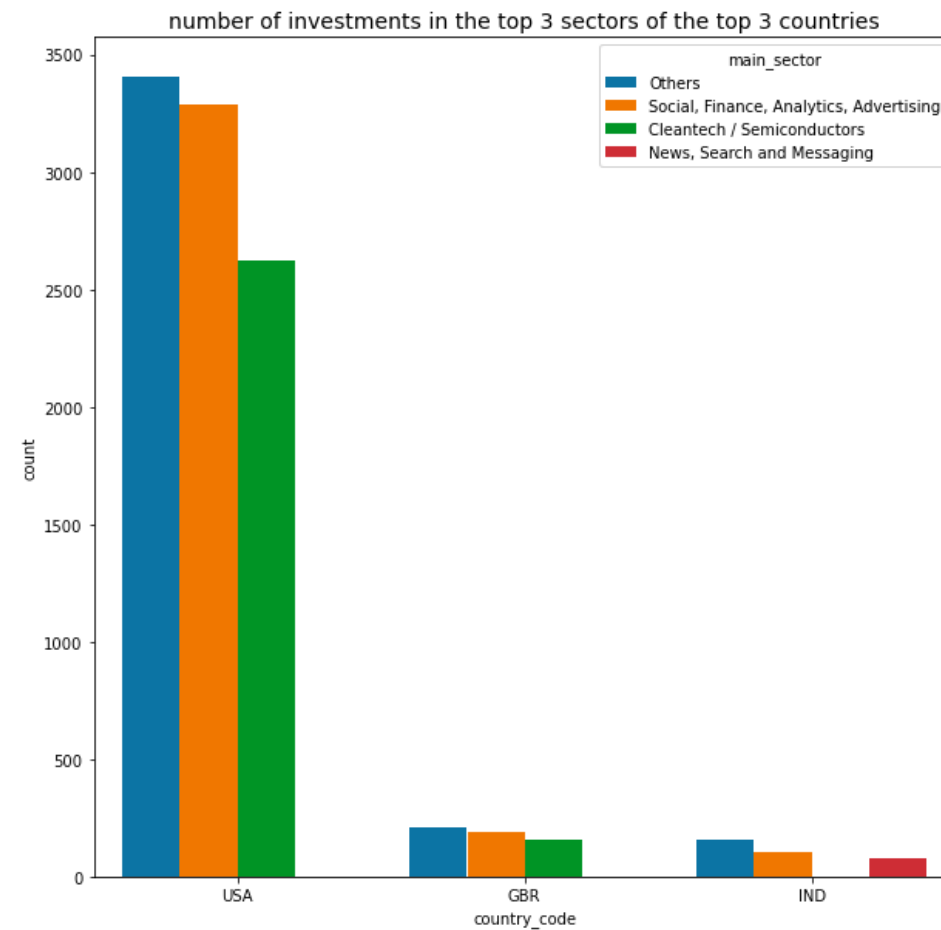
Visualisation of top9 countries & top3 English speaking countries with highest funding in venture funding type

Omitting CHN (CHINA) in top3 countries because English is not an official language there.
In India(IND), English is official & educational



Top 3 sectors of the top 3 countries in Venture Funding type (total number)

Total number of investments in the top 3 sectors of the top 3 countries in Venture Funding type



Top most Invested country in terms of Raised amount USD & number of Investments is

USA

Suitable investment type

Venture

Top 3 Suitable Main Sector by order

1. Others

(Software, Enterprise Software & E-Commerce are the top three primary sector in 'Others' Main sector)

2. Social, Finance, Analytics, Advertising

3. Cleantech / Semiconductors

Thank you

[EDA done by]

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