

# INVESTMENT CASE STUDY

## SUBMISSION

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# Analytical Strategy of Spark Funds

A large blue triangle graphic on the left side of the slide, pointing upwards, which serves as a background for the four horizontal boxes.

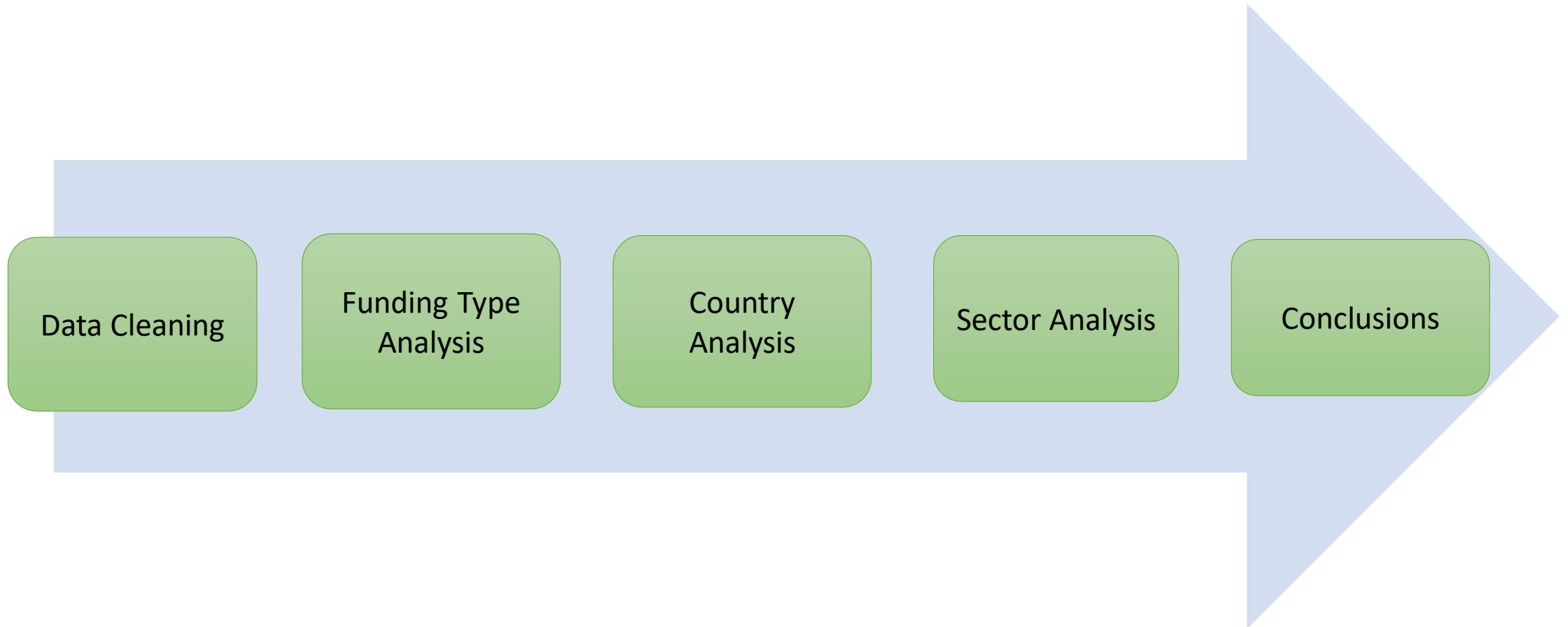
Analysis For Investment in Major English Speaking Countries Based On Type Of Investment

Strategy To Show Major Number Of Investors Who Are Investing In Particular Sector

Objective To Identify The Best Sector Through Analysis

Concluding The Best Investment In Provided Budget Between 5 to 15 million USD

# Analytical Approach for Investments Case Study



## Data Cleaning:

- As major part of analysis is data cleaning ,Analysis begins with importing the data from rounds2 and companies files into python with the pandas library read\_csv,as noticed there were discrepancies in data of company\_permalink and permalink columns of both data frames encoded them with standard python encoding types.
- Removed the special characters from name and permalink columns of rounds2 data frame and from company\_permalink column of companies data frame considered company\_permalink and permalink as the relation between two data frames because the values in those columns relevant to each other.
- Found the unique count of company\_permalink from rounds2 data frame and count of permalink from companies data frame based on the count of unique values from both permalink columns ,compared whether the rounds2 data frame consist of any company which is not present in companies data frame and as results from analysis we can confirmed that there are no companies exists in the rounds2 data frame that are not present in companies data frame.
- Converted the column values of company\_permalink, permalink of two data frames into lower case for further analysis of merging them .
- Hence crucial part Data cleaning is completed then we created master data frame from final insights of both companies and rounds2 data frame.

## Funding Type Analysis :

- Once the two data frames are merged found the count of observations from master frame data frame
- Dropped the unnecessary columns from data frame which are not used for analysis.
- Dropped the rows having nulls in raised\_amount\_usd column

- As per observation there are few rows having Nan values in country code but not deleting them as there are raised\_amount\_usd values exists in those rows. so, we are not cleaning Nan values in country code by assuming values present in raised\_amount\_usd column.
- Haven't dropped rows having Nan values in funding\_round\_code as the funding type and amount related to it will be lost.
- Haven't dropped rows having blank or Nan values in category\_list assuming it will be used in later part of analysis
- For more better understandings converted raised\_amount\_usd values in million
- As part of analysis found the raised\_amount\_usd average value of four funding types which are Venture,Angel,Seed,Private\_equity
- As per the analysis considered the venture as the best among the funding types between 5 million to 10 million budget.

### **Country Analysis :**

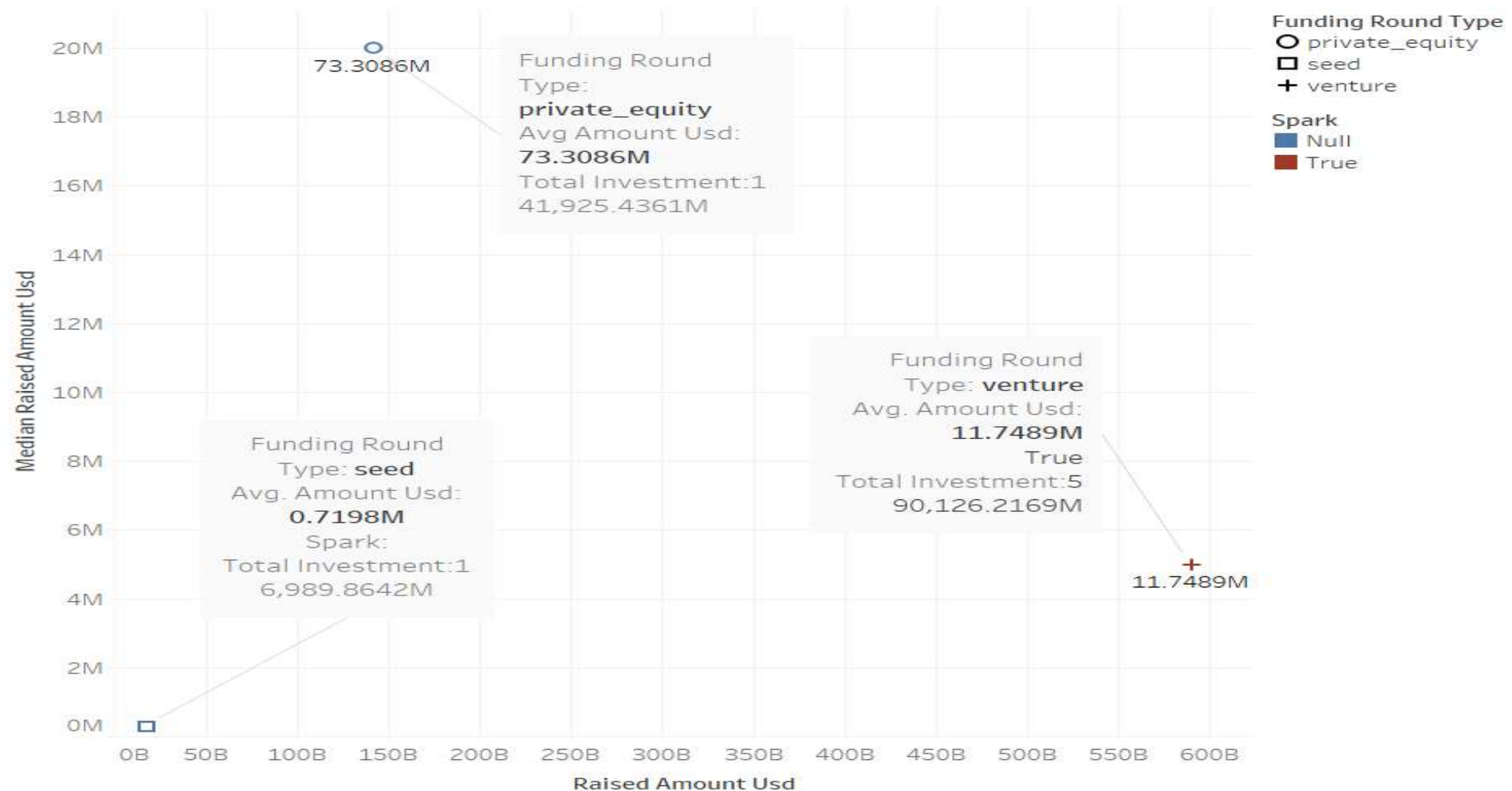
- As part of country analysis founded the Top 9 English speaking countries and from them United States, United Kingdoms, India are the Top 3.

### **Sector Analysis :**

- As part from Sector analysis created a new column primary sector from master\_frame data frame by Extracting the primary sector of each category list
- From the category\_list column
- As part of analysis next step was to import mapping file
- Created main\_sector column in mapping data frame and mapped with each primary sector to one of the eight main sectors.
- Once the mapping data frame was completed ,created a new master\_frame data frame by merging old master\_frame data frame with new mapping data frame .
- Dropped the unnecessary columns from master data frame which are not used for analysis.

- After the above process ,created the three data frames D1,D2,D3 for the top 3 countries USA,GBR,IND with funding type as venture and having budget between 5 million to 15 million
- Created count\_investments\_per\_mainSector as new column in three data frames to get the count value of investments for each main sector
- Created Total\_amount\_per\_mainSector as new column in three data frames to get the sum value of investments for each main sector
- Based on the count of investments ,sorted them in descending manner and found the top 3 sectors in each country
- As per above analysis from the top two main sectors extracted the company names which received the highest investment in each English spoken country

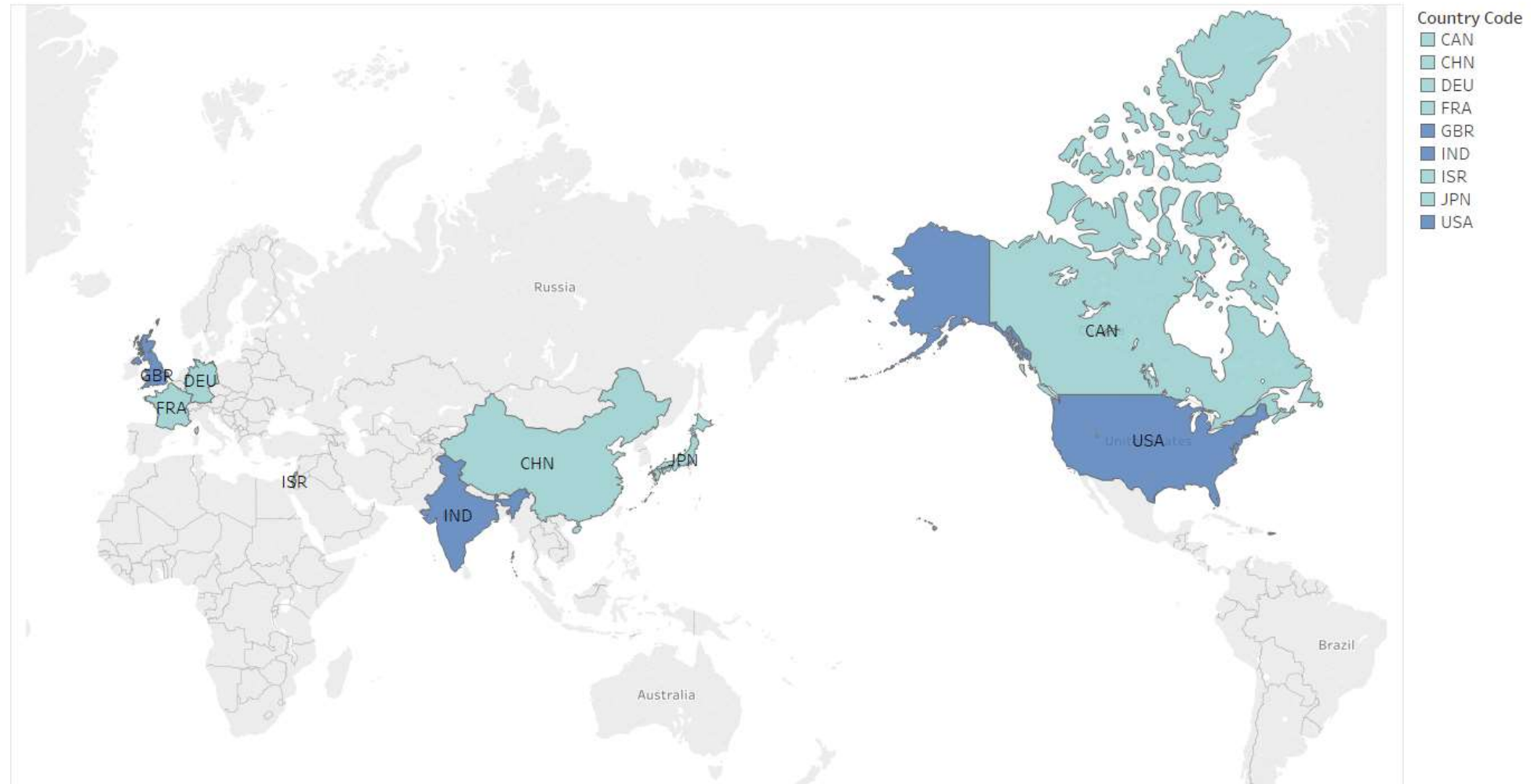
## Investment Suitable for Spark Funds



Sum of Raised Amount Usd vs. median of Raised Amount Usd. Color shows details about Spark. Shape shows details about Funding Round Type. The marks are labeled by average of Raised Amount Usd. The view is filtered on Funding Round Type and sum of Raised Amount Usd. The Funding Round Type filter keeps private\_equity, seed and venture. The sum of Raised Amount Usd filter keeps non-Null values only.

## Graphical Observations(Plot 2)

Top 9 Countries

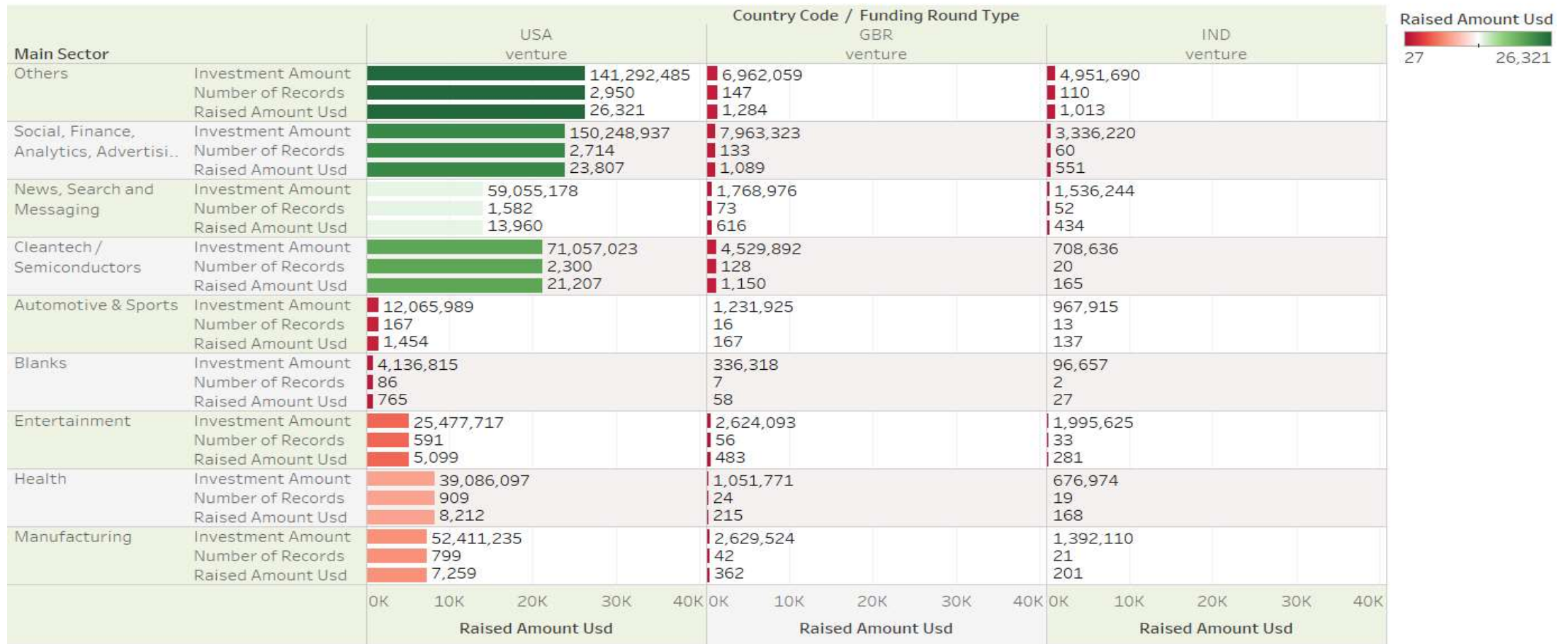


Map based on Longitude (generated) and Latitude (generated). Color shows details about Country Code. The marks are labeled by Country Code. The view is filtered on Country Code, which keeps 9 of 138 members.



## Graphical Observations(Plot 3)

### Top 3 Countries



Raised Amount Usd for each Main Sector broken down by Country Code and Funding Round Type. Color shows Raised Amount Usd. The marks are labeled by Investment Amount, Number of Records and Raised Amount Usd. The view is filtered on Country Code, which keeps GBR, IND and USA.

## Conclusions

- The investigation performed on the speculation issue looked by Spark reserves unmistakably helps in helping the CEO to take suitable choice on the areas of a classification for a specific nation to make the venture. We could get very precise outcomes to be exhibited to the administration by discovering the best 3 parts to put resources into the main 3 nations. This plainly showed the intensity of information investigation when it come to tackling the everyday issues looked by the corporate or people hoping to take real choices which shapes the fate of the organization.
- From the Given case study and with the help of python and tableau it has been concluded that 'Ventures ' has been the best suited investment type for funding .
- From the Given case study and with the help of python we conclude the top 3 countries are USA,GBR,IND
- The Company which is having the highest investment in India for the top sector is FirstCry.com and for the second top sector highest investment received is Manhattan Systems.
- The Company which is having the highest investment in USA for the top sector is Virtustream and for the second top sector highest investment received is SST Inc. (Formerly ShotSpotter)
- The Company which is having the highest investment in GBR for the top sector is Electric Cloud and for the second top sector highest investment received is Celtick Technologies