

INVESTMENT ASSIGNMENT SUBMISSION

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Spark Funds' business objective?

The business objectives and goals of data analysis are pretty straightforward.

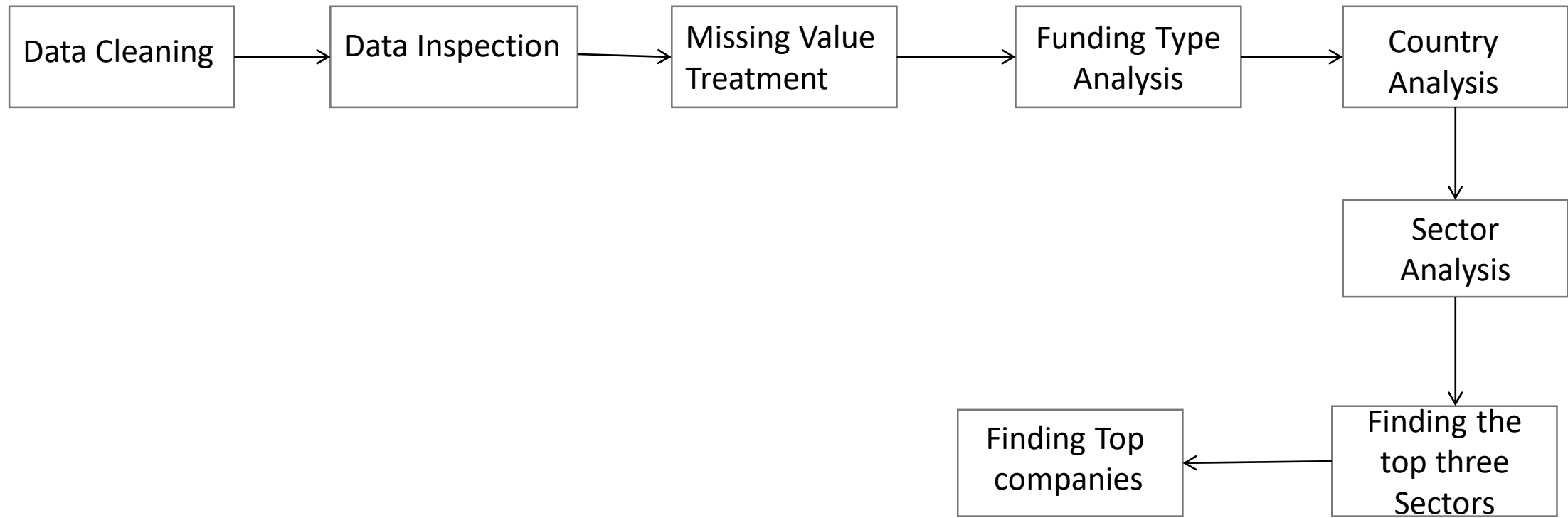
- **Business objective:** The objective is to identify the best sectors, countries, and a suitable investment type for making investments. The overall strategy is to invest where others are investing, implying that the 'best' sectors and countries are the ones 'where most investors are investing'.
- **Goals of data analysis:** Our goals are divided into three sub-goals:
- **Investment type analysis:** Comparing the typical investment amounts in the venture, seed, angel, private equity etc. so that Spark Funds can choose the type that is best suited for their strategy.
- **Country analysis:** Identifying the countries which have been the most heavily invested in the past. These will be Spark Funds' favourites as well.
- **Sector analysis:** Understanding the distribution of investments across the eight main sectors. (Note that we are interested in the eight 'main sectors' provided in the mapping file. The two files — companies and rounds2 — have numerous sub-sector names; hence, you will need to map each sub-sector to its main sector.

Constraints:

- Spark Funds wants to invest between 5 to 15 million USD per round of investment
- Spark Funds wants to invest only in English-speaking countries because of the ease of communication with the companies it would invest in.

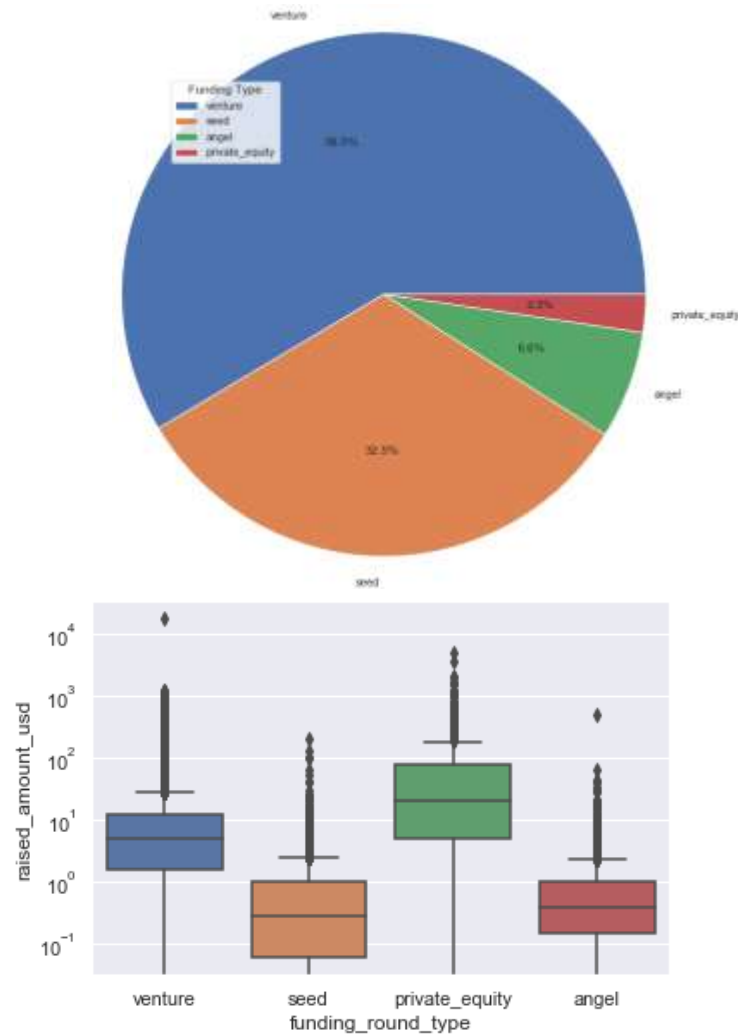
Problem solving methodology

Flow Chart



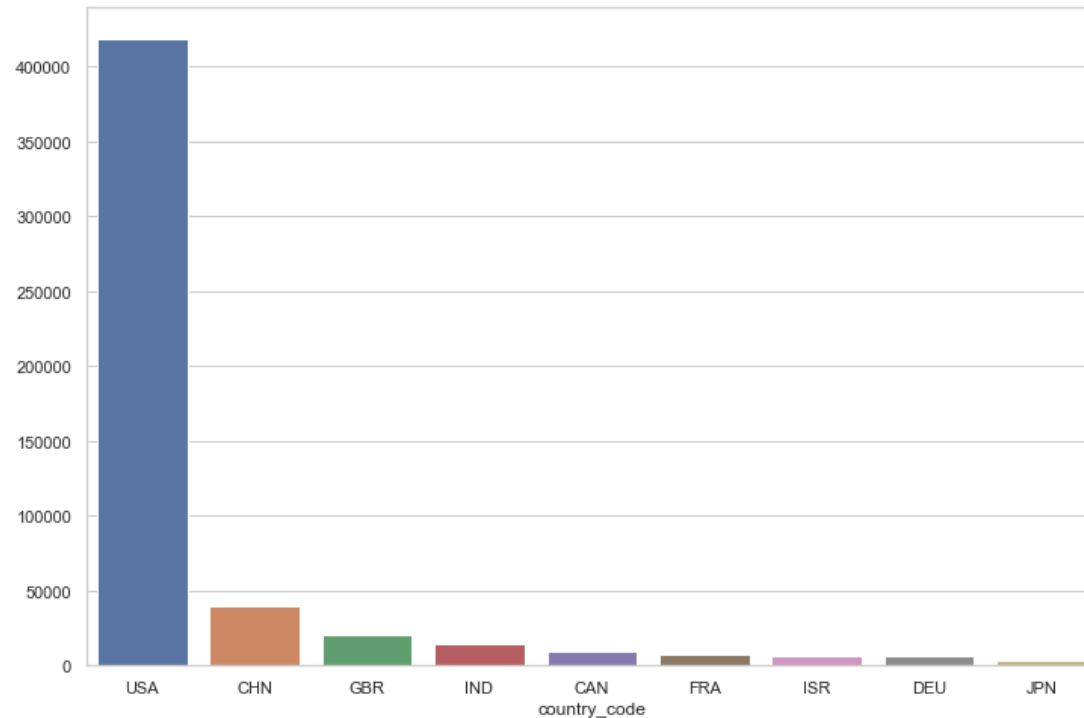
- Finding unique companies present in round2 file
- Finding unique companies present in companies file
- Data inspection
- Missing Value Treatment
- Finding the observations by merging the columns of companies file with round2

Funding Type Analysis



- Plotted Pie chart and Boxplot
- Calculated median for each of four funding type
- The median of Venture funding is 5 millions
- Predicted that most of investors are investing in Venture Funding type.
- Spark Funds can choose this type of funding that is best suited for their strategy

Country Analysis



- Plotted a bar graph
- Compare the analysis using website

https://en.wikipedia.org/wiki/List_of_territorial_entities_where_English_is_an_official_language

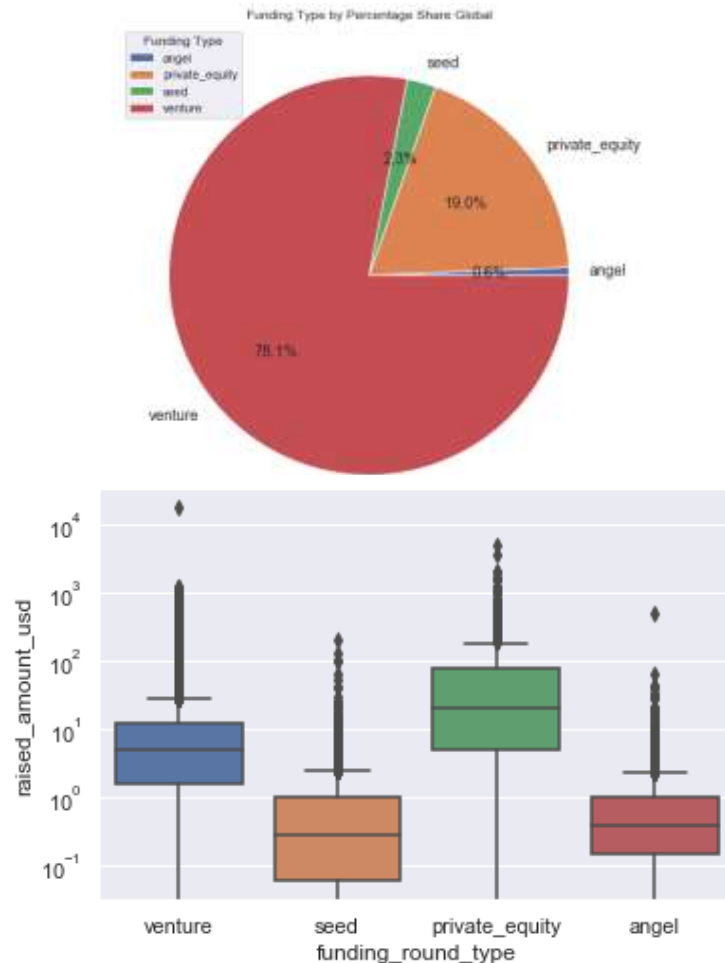
- Predicted the top three English Speaking countries i.e. USA, GBR, IND

Sector Analysis

- **Read the mapping file**
- **Mapped the primary sectors to main sectors**
- **Created three separate data frames D1, D2 and D3 for each of the three countries containing the observations of Venture funding type**
- **Total number of investment & amount of investment are calculated**
- **Found three top sectors of each country**
- **Found top companies which received highest investment**

Results

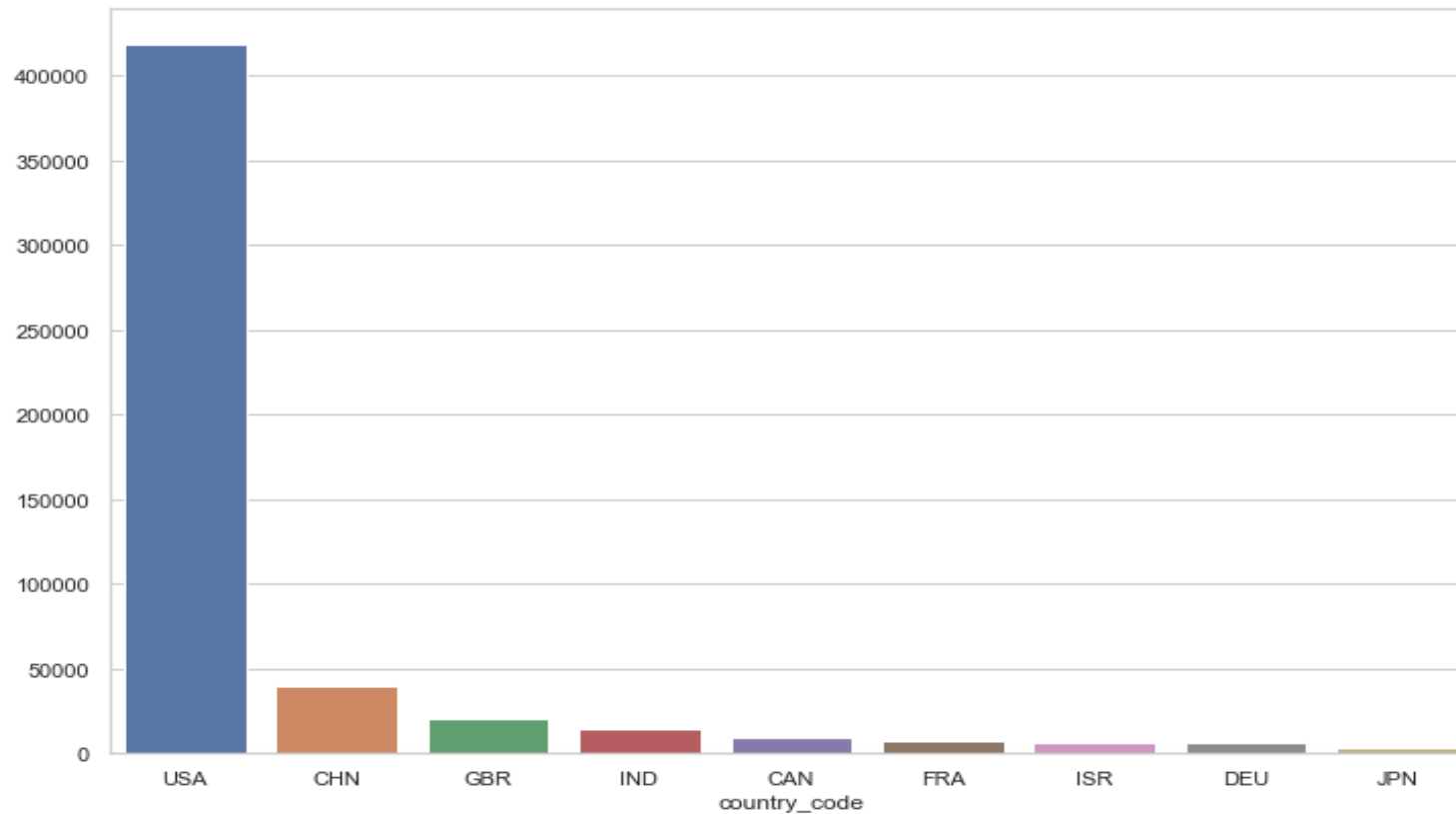
Plot 1 :A plot showing **the representative amount of investment** in each funding type. This chart should make it clear that a certain funding type (FT) is best suited for Spark Funds



We can clearly predict from pie chart and box plot that most of the investors are investing in **venture funding type** so Spark Funds can choose this type of funding that is best suited for their strategy.

Results

Plot 2: A plot showing the top 9 countries against the total amount of investments of funding type FT. This should make the top 3 countries (Country 1, Country 2, and Country 3) very clear



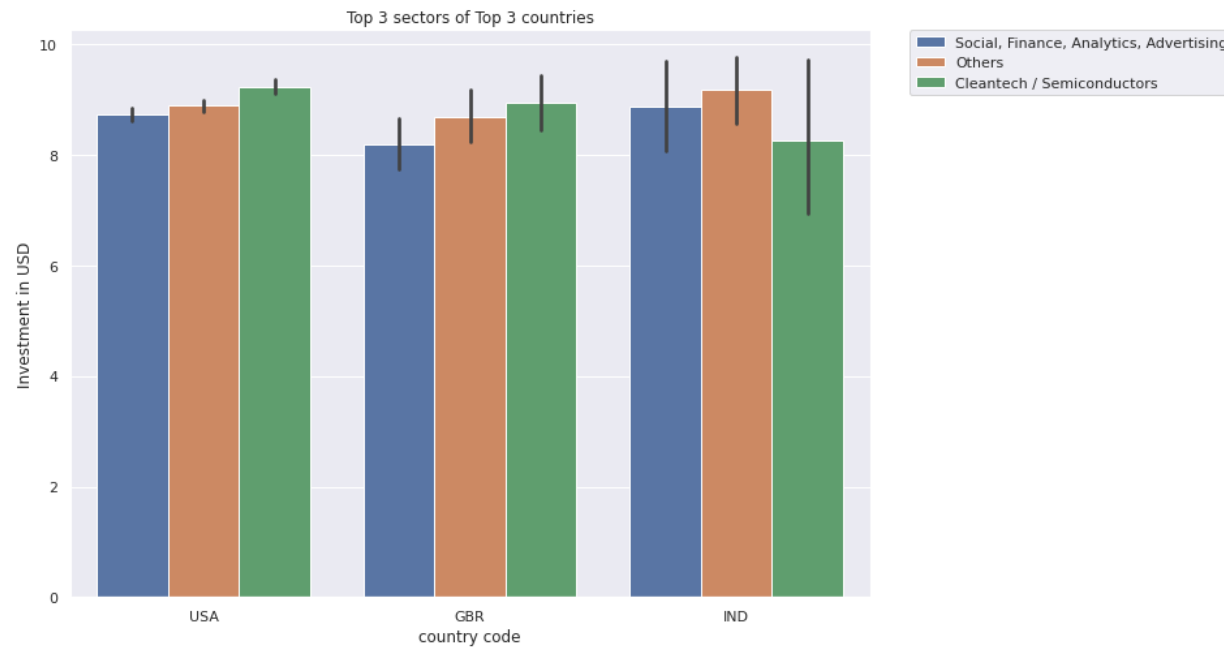
Top English Speaking Countries

- USA
- GBR
- IND

https://en.wikipedia.org/wiki/List_of_territorial_entities_where_English_is_an_official_language

Results

Plot 3 : A plot showing the number of investments in the **top 3 sectors** of the **top 3 countries** on one chart (for the chosen investment type FT). This plot should clearly display the top 3 sectors each in Country 1, Country 2, and Country 3.



Top three countries

- USA
- GBR
- IND

Top three sectors

- Others
- Social-Finance-Analytics-Advertising
- Cleantech / Semiconductors

Conclusion

Based on analysis performed, Spark funds should invest in-

- Funding Type-Venture funding types
- Top English Speaking countries to invest in- USA,United Kingdom (GBR)and India(IND)
- Top sectors to invest in- Others, Social-Finance-Analytics-Advertising , Cleantech / Semiconductors

- Top companies to invest in-

USA- virtustream-	64.3	millions
USA -choicestream-	73.3	millions
India(IND)- manthan-systems-	50.7	millions
India(IND) -firstcry-com-	39	millions
United Kingdom(GBR) -electric-cloud	37	millions
United Kingdom(GBR)- eusa-pharma-	35.6	millions