

Exploratory Data Analysis

LENDING CLUB CASE STUDY

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Abstract

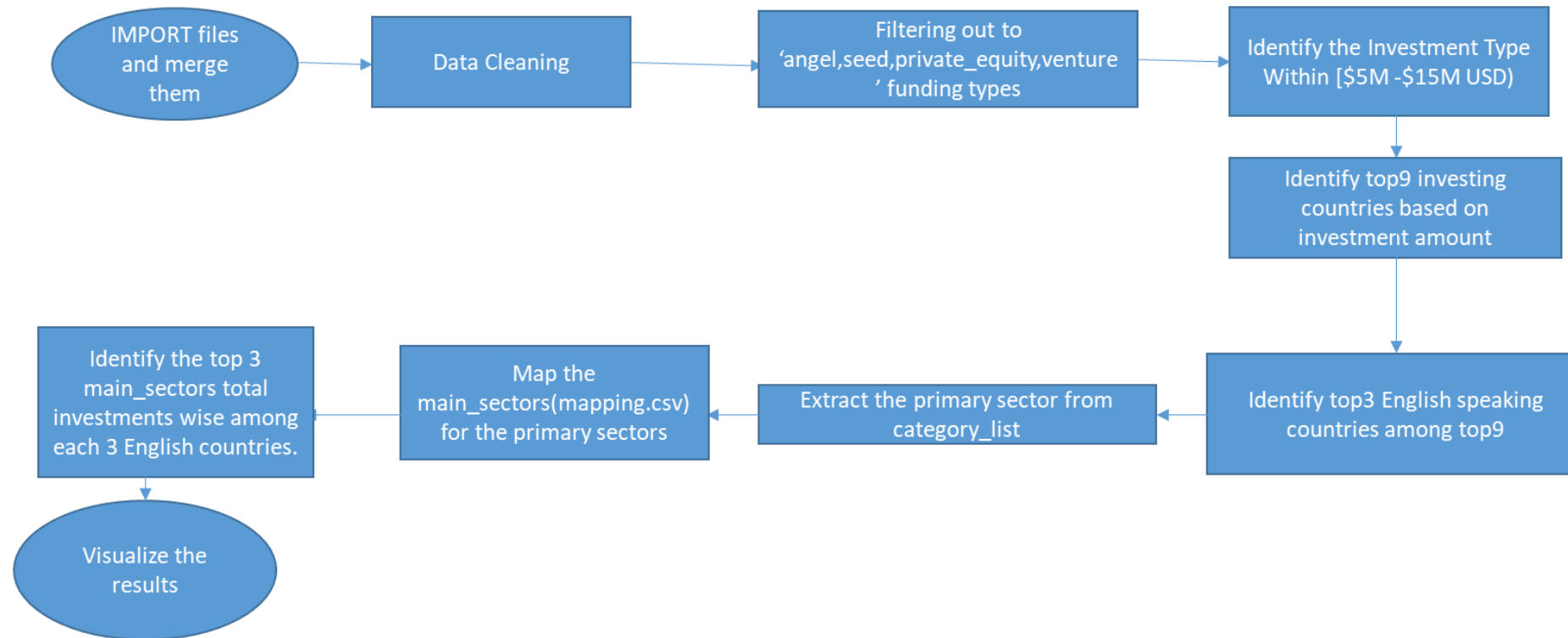
- **Aim:** The objective is to identify the best sectors, countries, and a suitable investment type for making investments. The overall strategy is to invest where others are investing, implying that the 'best' sectors and countries are the ones 'where most investors are investing'.
- **Business and Data Understanding**

Spark Funds has two minor constraints 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.

- **Analysis:**
 - Investment type analysis
 - Country Analysis
 - Sector Analysis

Problem solving methodology



Analysis

Funding Type Analysis –

Identifying the Investment Type (\$5M USD -\$15M USD)

Step 1 – Merge the 'companies.csv' and 'rounds.csv'

Step 2 – Performed some data cleaning on the data.

- * Dropped the 'funding_round_code' column ,since it has 73% of null values and it doesn't have much significance in our analysis.
- * Removed the rows, where we don't have the 'category_list' and 'country_code' - since all our analysis depends on them.
- * Filled the null values in 'raised_amount_usd' column with 0, considering the funds haven't raised yet.
- * Standardized the 'raised_amount_usd' to Millions USD for the readability purpose.
- * Haven't removed the outliers, since removing them didn't produce any significant answer in deciding the funding type.
- * Not touching the 'founded_at' column since it doesn't have any part in the analysis.

Step 3 – Filtered out the data to 'SEED,ANGEL,VENTURE,PRIVATE_EQUITY' investments types.

Step 4 - Analyzed the data available and found that 'VENTURE' is the best suited investment type for the 'SPARKS funds' to invest in.

Country Analysis –

Top9 countries, which have received the highest total funding

On country-wise analysis, we found out that 'USA, CHN, GBR, IND, CAN, FRA, ISR, DEU, JPN' are the top9 countries with the highest funding.

Analysis

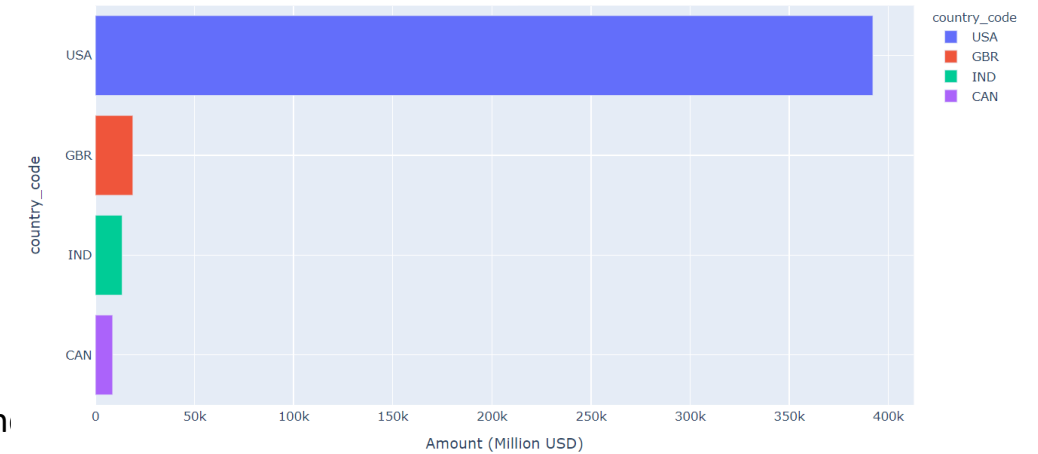
Top 3 English Speaking Countries among top9:

Among top9 countries, 'USA, GBR, CAN, IND' are the English speaking countries.

- USA, GBR,IND are the top 3 Countries.

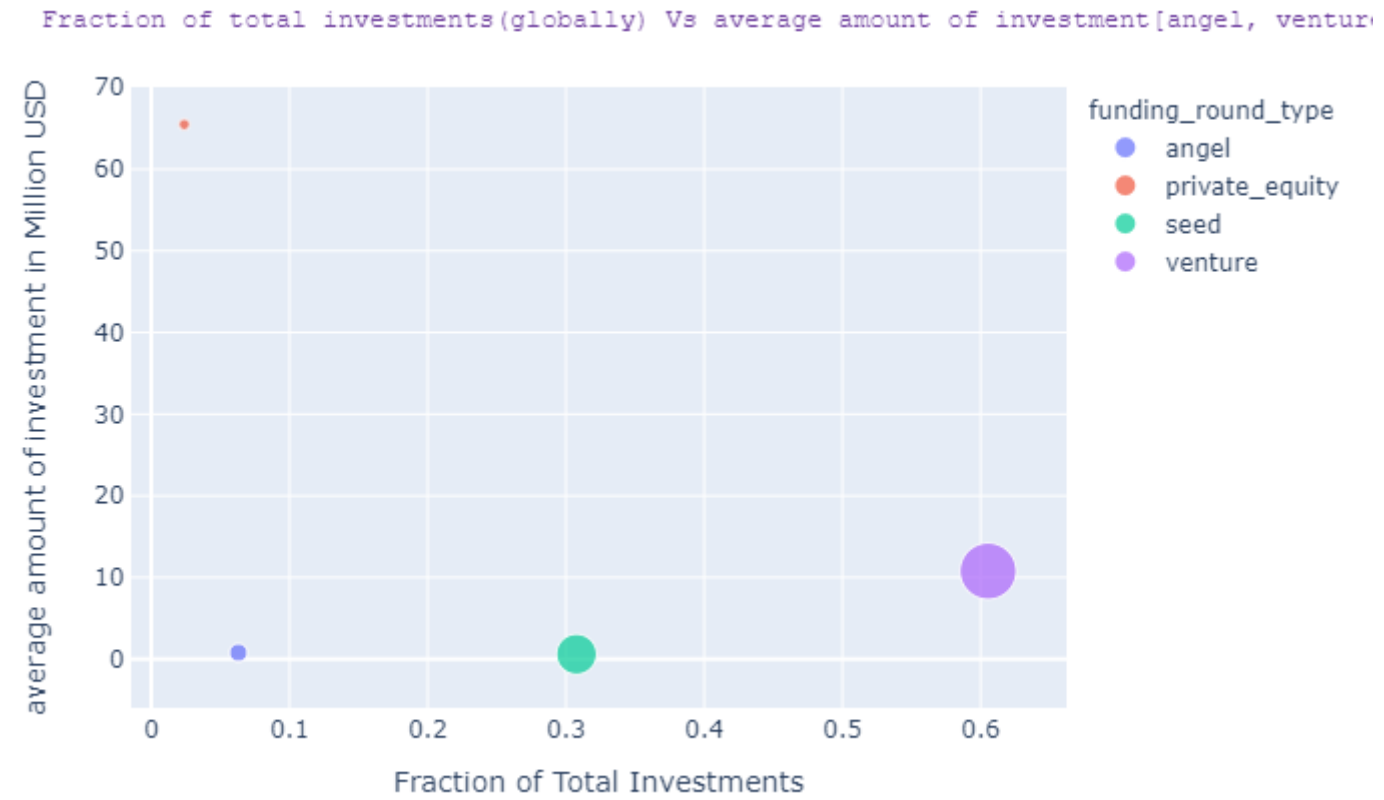
Sector Analysis –

- identified the primary_sector from the category_list and mapped the correspon
'main_sectors' to it.
- Based on total investment count and the amount of investments – Following were the top 3 main sectors in top 3 countries:
- [others](#), [Cleantech/Semiconductors](#), [\[Social,Finance,Analytics,Advertising\]](#), [\[News, Search and Messaging\]](#)
- Below are the best suited companies to be invested in top 3 countries:

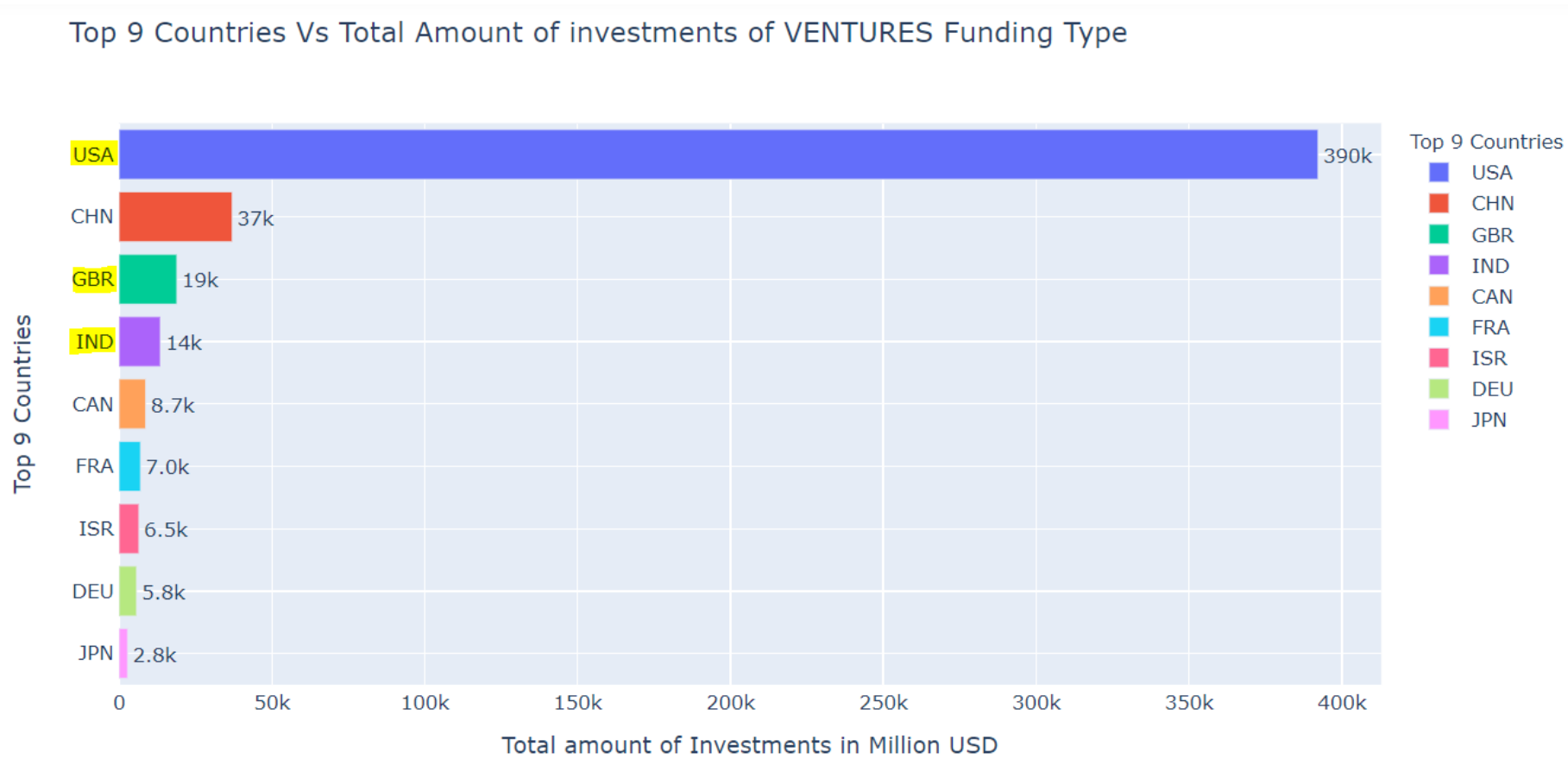


	USA	GBR	IND
Top Company in first best sector with highest investment in top sector(investment count-wise)	SoFi	OneWeb	Flipkart
Company with highest investment in second best sector	Freescale Semiconductor	Immunocore	Quikr

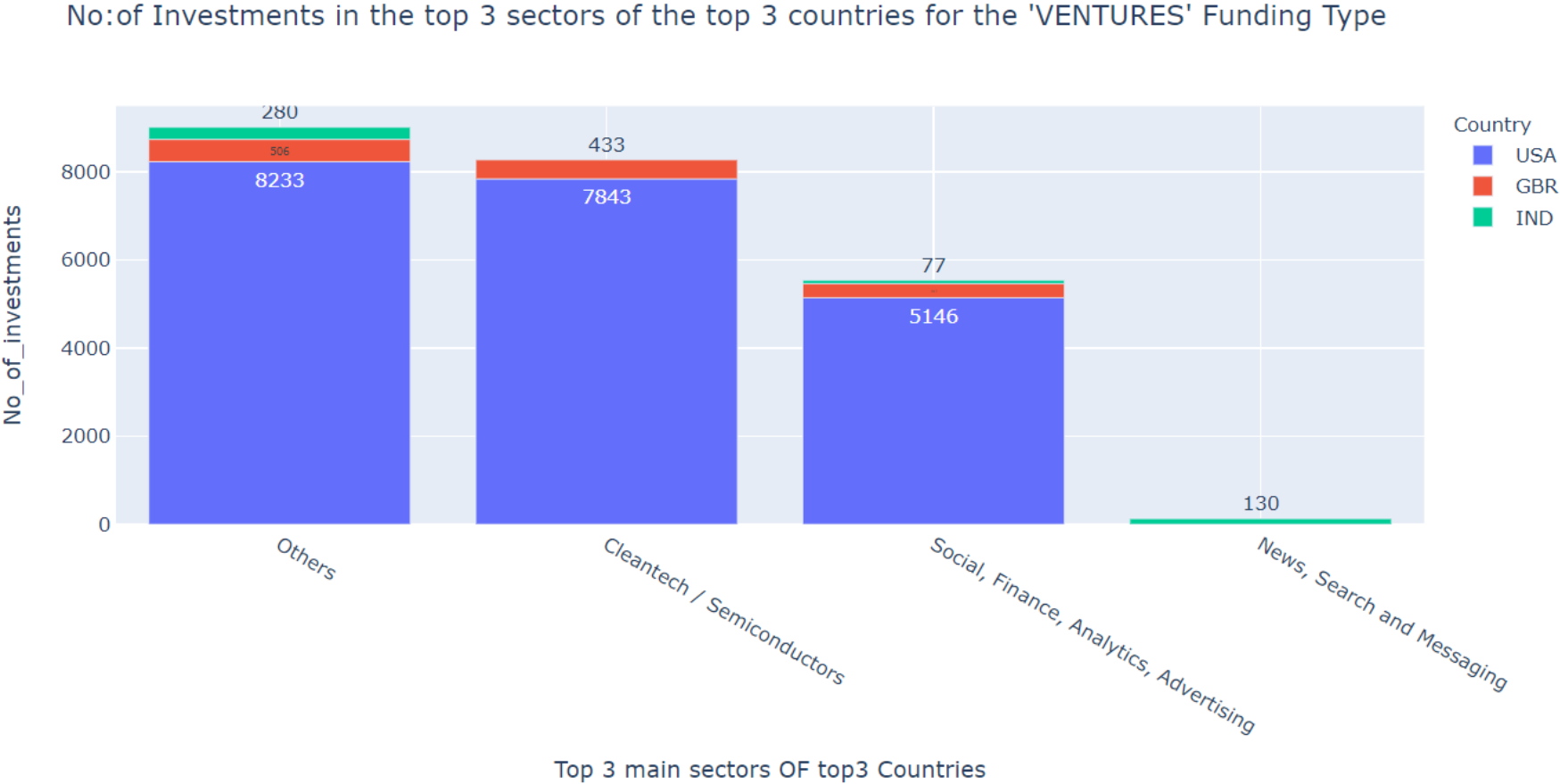
plot showing the fraction of total investments (globally) in angel, venture, seed, and private equity, and the average amount of investment in each funding type.



A plot showing the top 9 countries against the total amount of investments of funding type 'VENTURE'



A plot showing the number of investments in the top 3 sectors of the top 3 countries



Conclusions

From the analysis, SPARK Funds can invest in the following sectors of the 'VENTURE' type of investment in USA, UK(GBR) , India(IND)

1. Others
2. Cleantech/Semiconductors
3. Social,Finance,Analytics,Advertising
4. News, Search and Messaging