SUICIDE RATES CASE STUDY

SUBMISSION

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• Abstract

- This compiled dataset pulled from four other datasets linked by time and place, and was built to find signals correlated to increased suicide rates among different cohorts globally, across the socio-economic spectrum.
- The data has considered only the trips from the city to the airport and vice versa.
- From this we can get to know how suicide rate is related to many factors
- This will help us to know which group to target and thus save lives

Problem solving methodology (EDA)

- Data Sourcing
- Data Cleaning
- Univariate Analysis
- Segmented Analysis
- Bivariate Analysis

• Data Sourcing / Data Cleaning

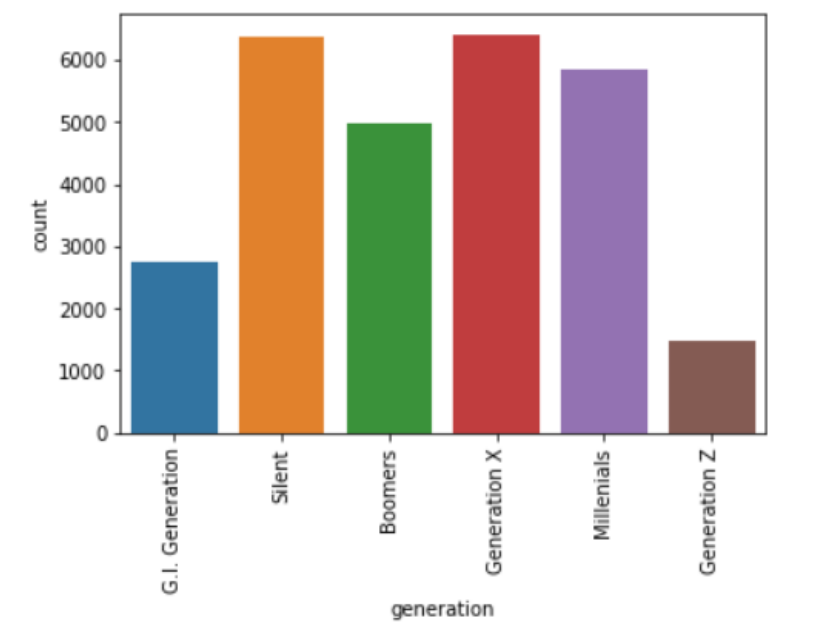
- The data was received from few sites as shown below:
  - United Nations Development Program. (2018). Human development index (HDI). Retrieved from http://hdr.undp.org/en/indicators/137506
  - World Bank. (2018). World development indicators: GDP (current US$) by country:1985 to 2016. Retrieved from http://databank.worldbank.org/data/source/world-development-indicators#
  - [Szamil]. (2017). Suicide in the Twenty-First Century [dataset]. Retrieved from https://www.kaggle.com/szamil/suicide-in-the-twenty-first-century/notebook
  - World Health Organization. (2018). Suicide prevention. Retrieved from http://www.who.int/mental_health/suicide-prevention/en/
  - https://www.kaggle.com/russellyates88/suicide-rates-overview-1985-to-2016
- In case of Data cleaning:
  - Make age bins
  - Remove country-year
  - Change column headings
  - Change the type of 'gdp for year'

• Univariate Analysis

The analysis was done in two different ways:

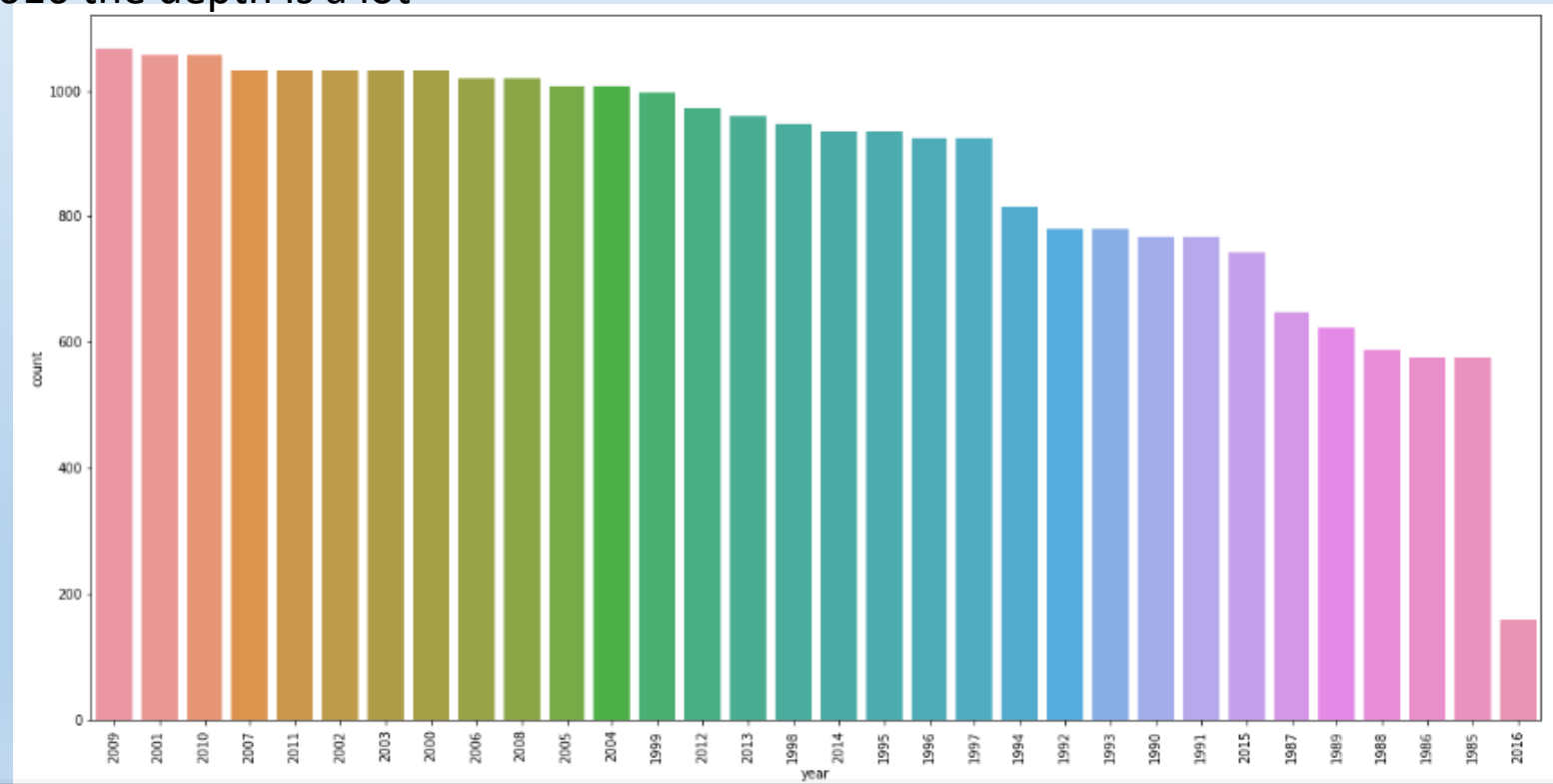
- Unordered Categorical

Each generations have different levels as visible



- Ordered Categorical

It's clear that there is a gradual decrease in the count through the years but in 2016 the depth is a lot

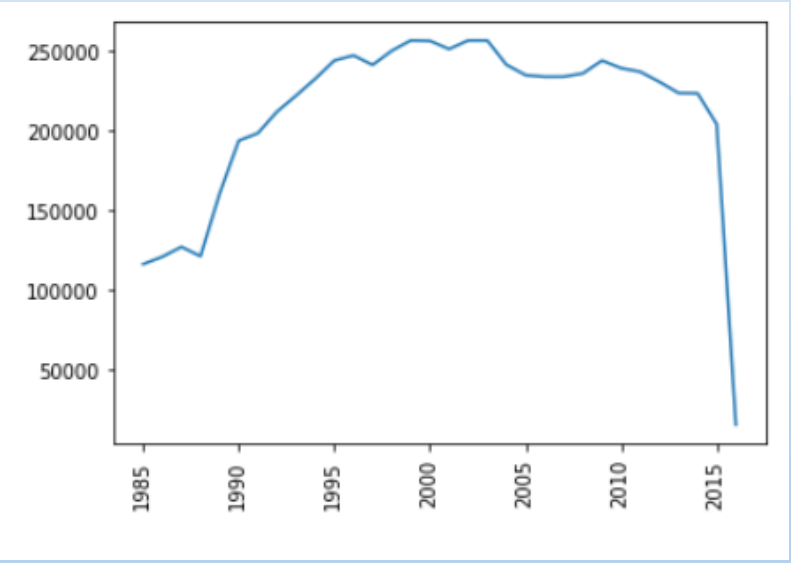


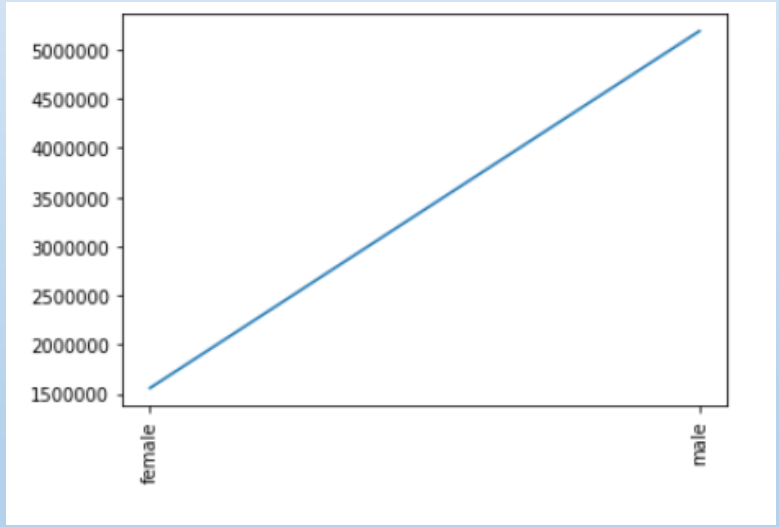
- *Each generations have different levels as visible*
- *It's clear that there is a gradual decrease in the count through the years but in 2016 the depth is a lot*

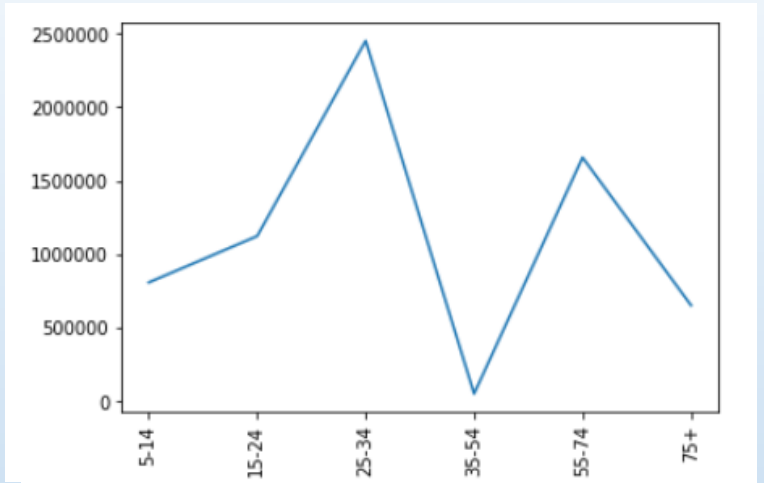
• Segmented Univariate Analysis

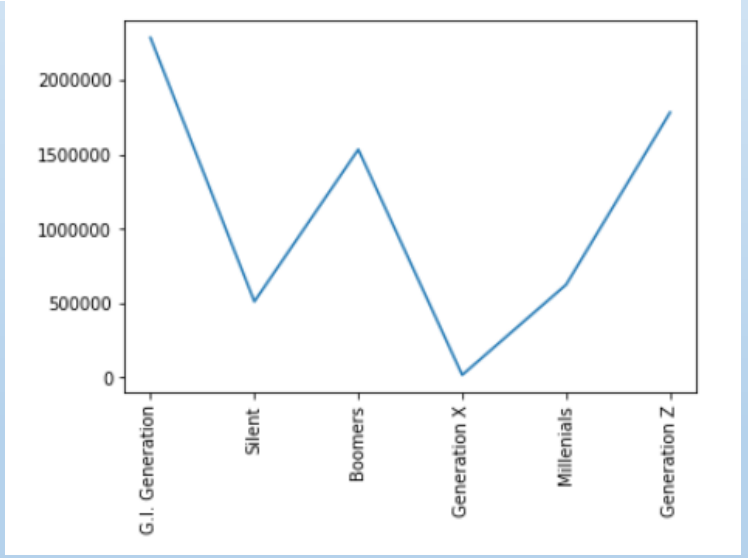
In this grouped variables and plotted against other variables to find results.

'Suicide Number‘ is grouped in the below cases:





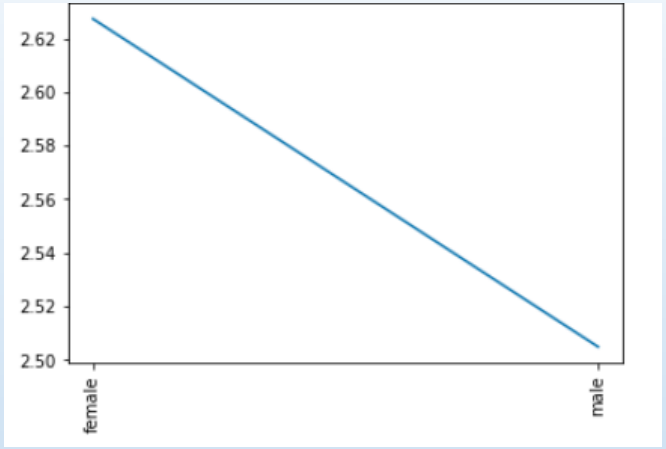


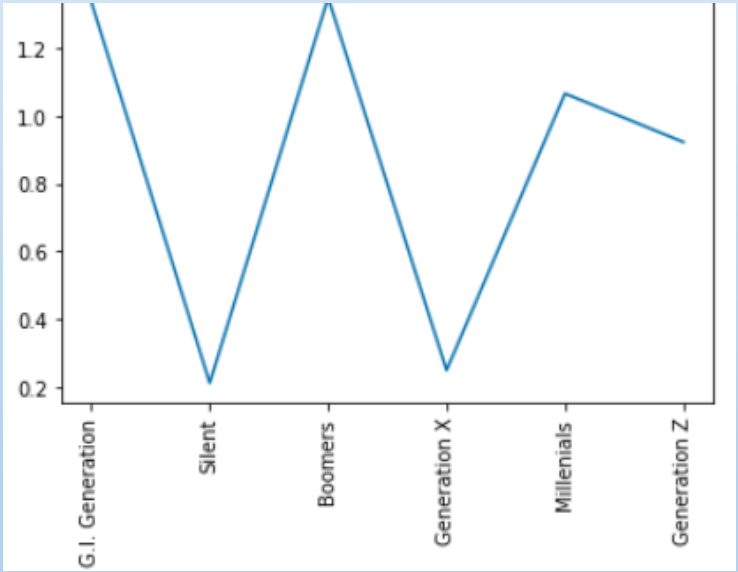


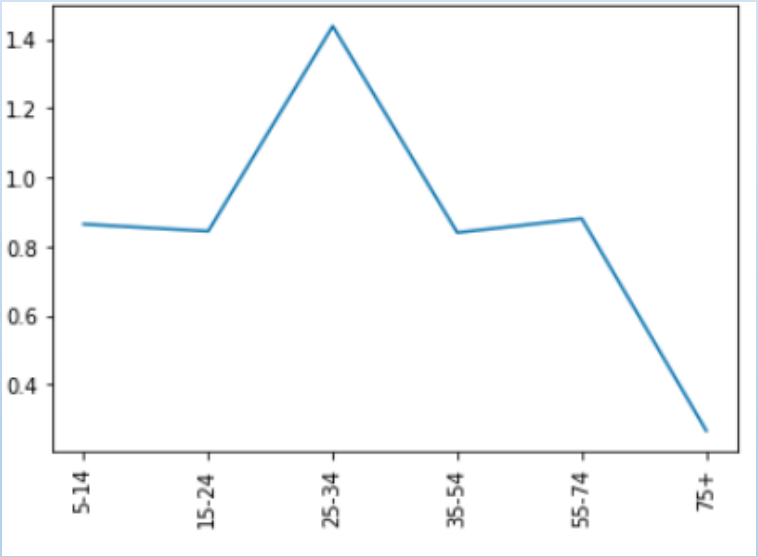
- ***The number of suicide was less till 1990s then it increased to a large extend and has had a quick drop in 2016***
- ***Men seems to be falling in trap of suicide as compared to a female***
- ***There is a major peak at 25-34 and a huge depth at 35-54 in the number of suicides***
- ***In number of suicides: - Peak: 'GI generation‘ ,'Boomers‘ ,'Generation Z‘ - Depths: 'Generation X', 'Silent'***

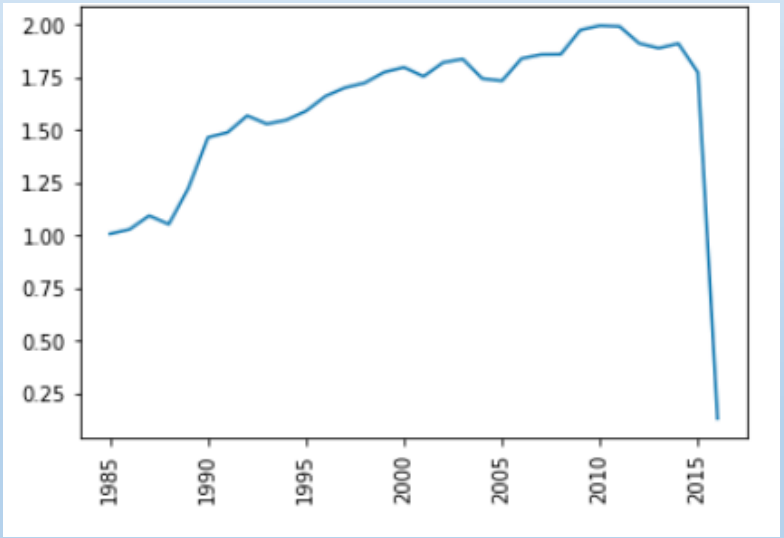
• Segmented Univariate Analysis

‘Population’ is grouped in the below cases:





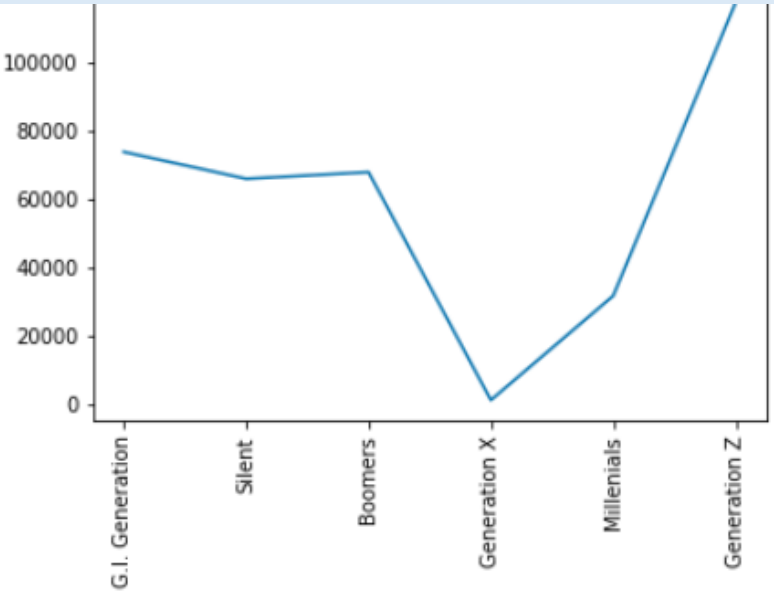


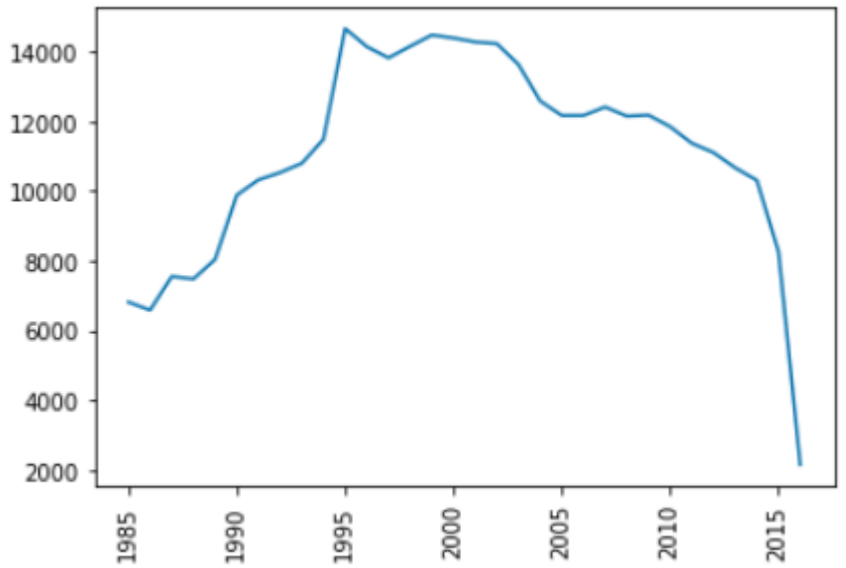


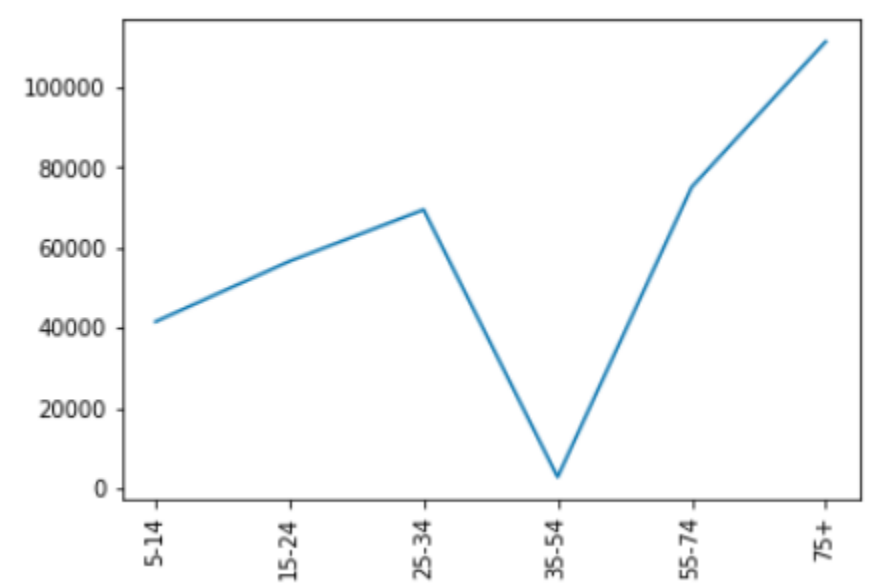
- ***In population:*** ***- Peak: 'Brazil','Japan','United States‘*** ***- Depths: Most countries other than these***
- ***In year:*** ***- Peak: '2010','2002','2000‘*** ***- Depths: '1985','2016'***
- ***In age:*** ***- Females more than males***
- ***In generation:*** ***- Peak: 'Boomers','GI generation','Millenials‘*** ***- Depths: 'Silent','Generation X'***

• Segmented Univariate Analysis

‘Suicides/100k population‘ is grouped in the below cases:





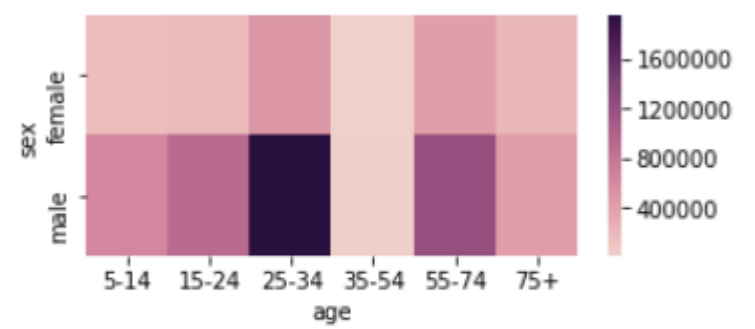


- *- Peak: 'Russian Federation','Hungary','Lithuania‘*
- *- Peak: '1995','1999','2002‘*
- *Males are more than female*
- *- Peak: '75+','55-74','25-34‘*
- *- Peak: 'Generation Z','G.I. Generation‘*

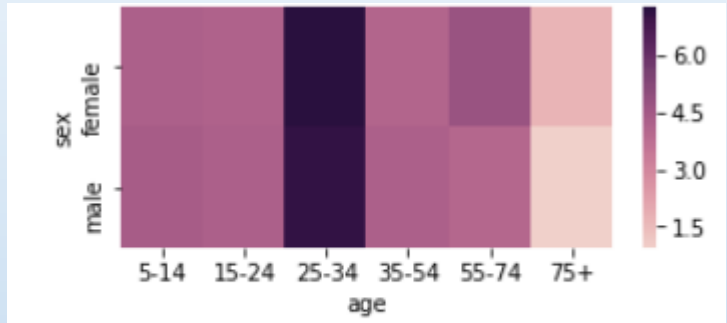
- Depths: There are many countries
- Depths: '2016','1986','1987‘

- Depths: '35-54','5-14'
- Depths: 'Generation X','Millenials'

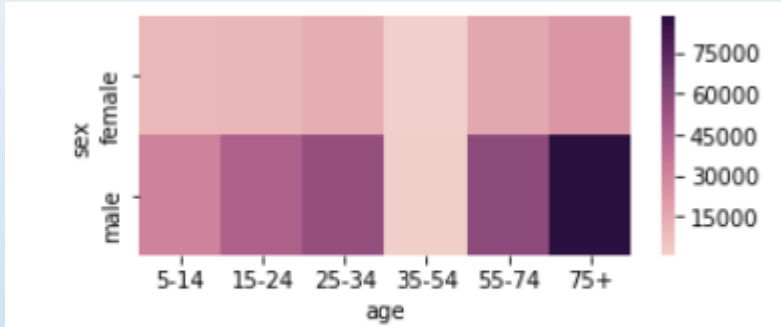
• Bivariate Analysis



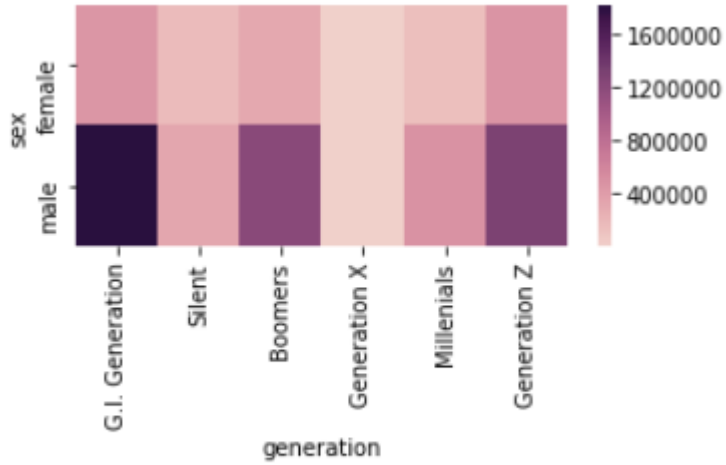
In 'Number of Suicides':



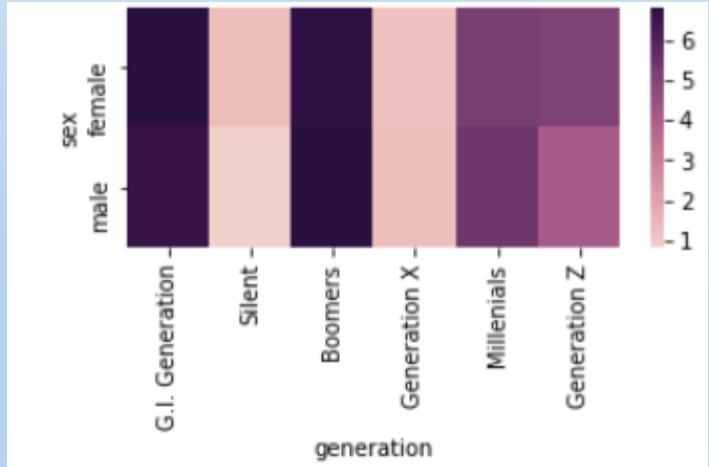
In 'Population ':



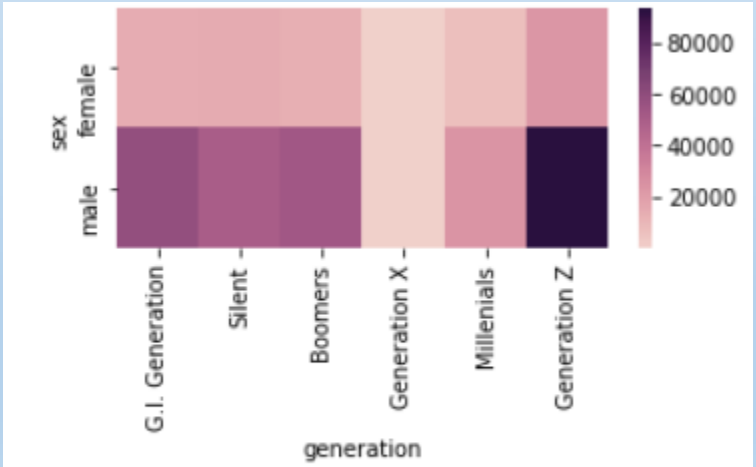
In 'suicides/100k Population':



In 'Number of Suicide':



In 'Population':



In 'Suicides/100k Population':

• Conclusion

Issues	Possible solutions
It is visible that more male are being a trap under depression and suicide.	More campaigns need to be done aiming the male folks
It is visible that the gdp among female is more in some cases and so is the suicide rate	This shows that along with money many issues get solved and that countries will less gdp need to focus on their male population
GI generation and millennials are facing a lot of issues	These groups of generations can be given counselling and education on depression and suicidal thoughts to get them to accept that they have issues and that needs to be solved.
United States, Russian Federation, Japan are the countries with good gdp but high rates od suicide	This shows that it’s not always about money and that these countries need to help out people by making psychiatry hospitals free for access
It looks like as the age goes on even the suicide rates increase. A good peak is visible among 25-35.	This means that we need to help out older people to get on their feet and no commit such things. The people in the age of 25-25 are working class people so they need to be provided with counselling in the offices itself