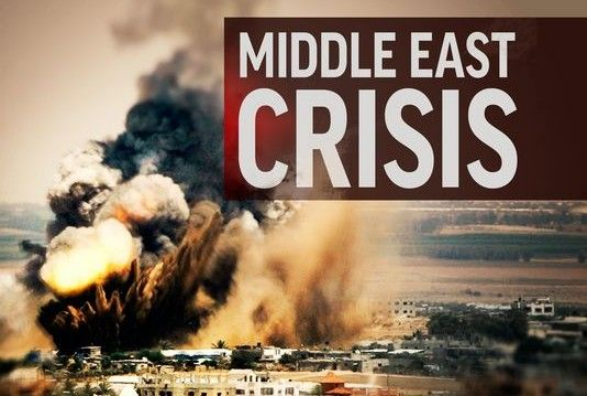


Suicide Rates

and

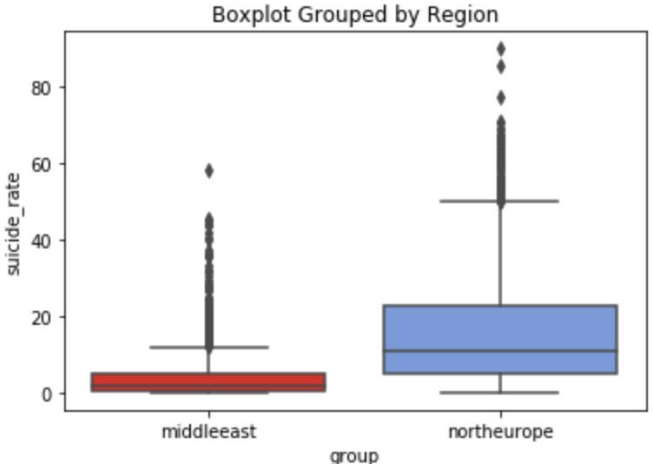
What's behind them?

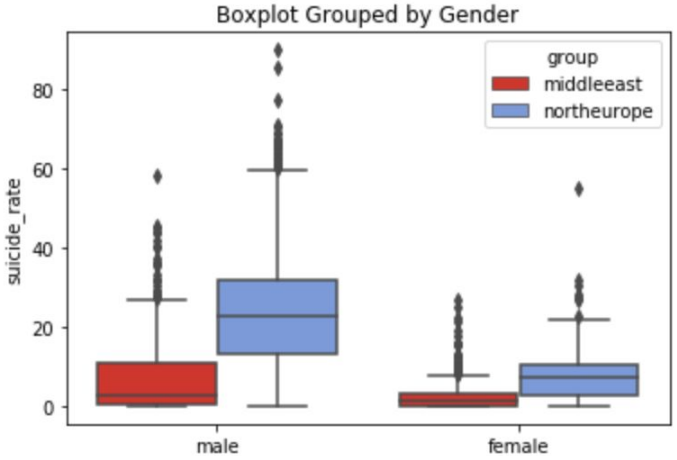
Group Blackcurrant

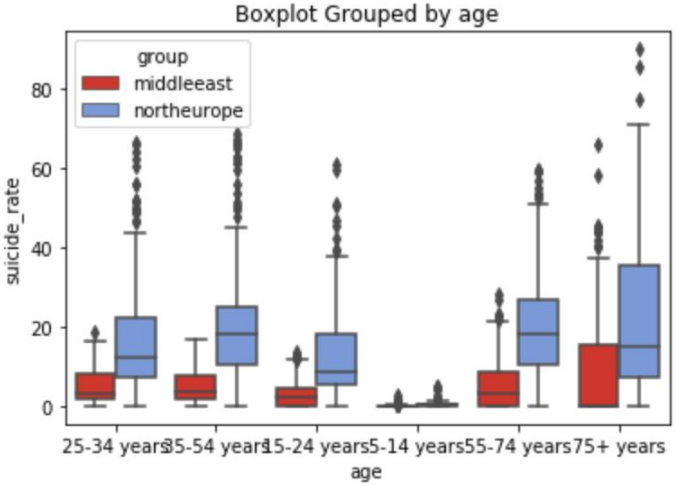
Zuxuan Huai, Junpeng Jiang, Wenxin Zhou, Lijia Liu

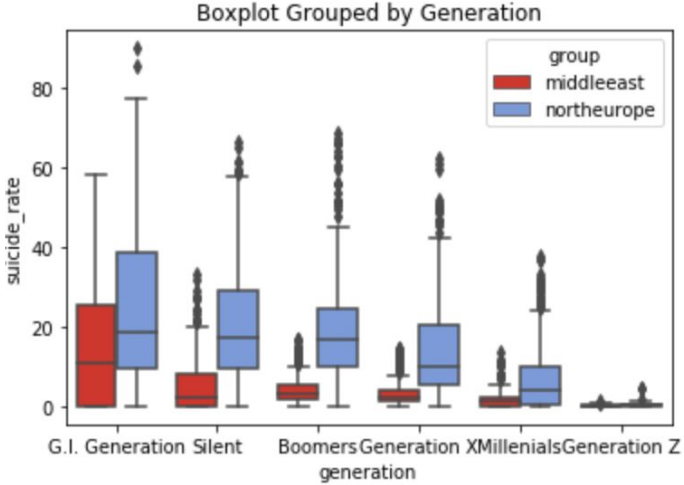
Overview

- Region
- Gender
- Age
- Generation







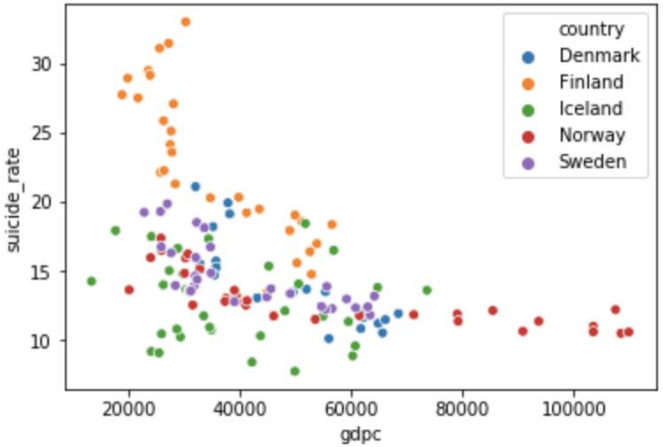


GDPC

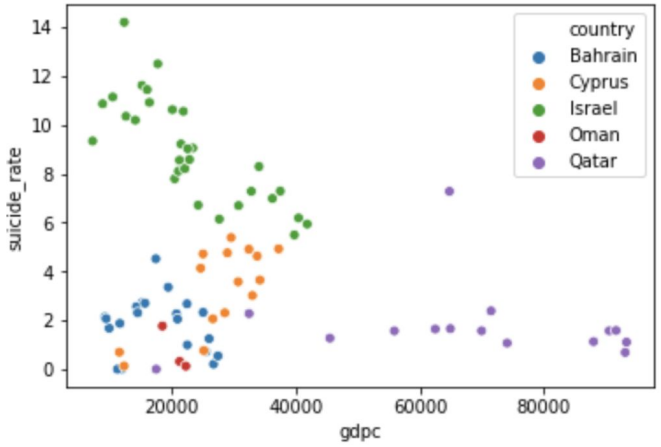
Northern Europe:
Overall trend

Middle East:
Unique pattern

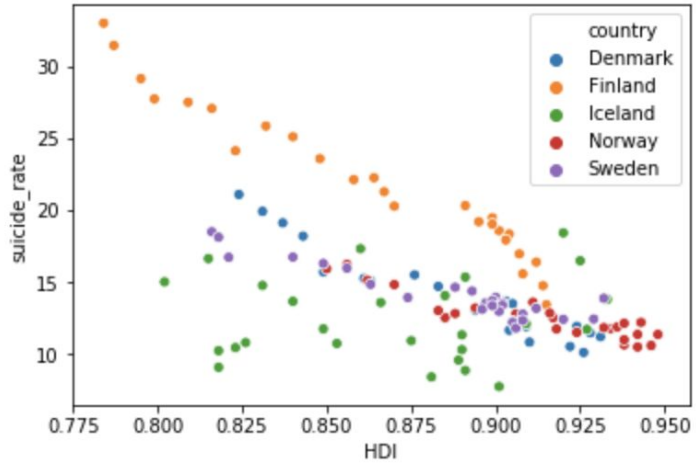
Northern Europe

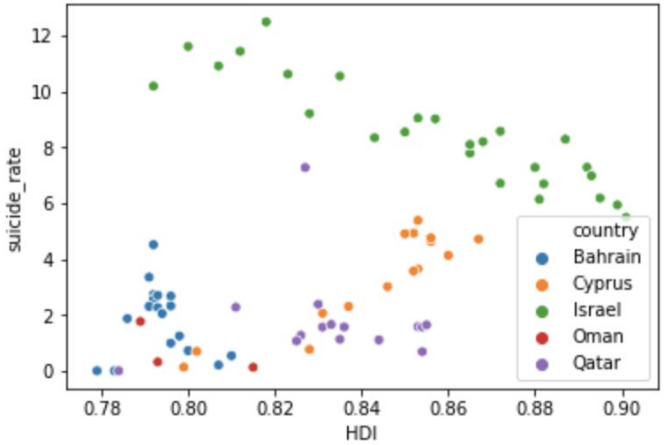


Middle East



HDI

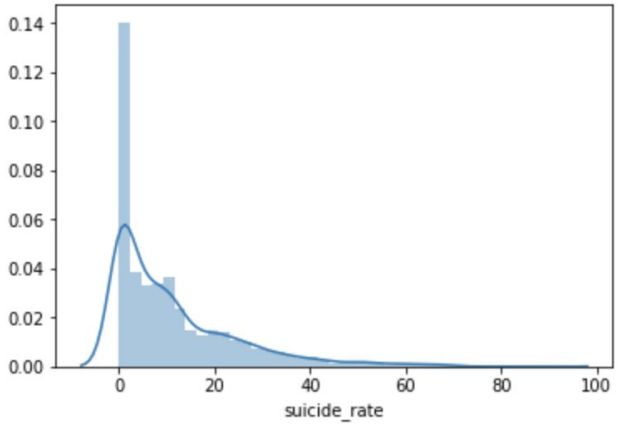


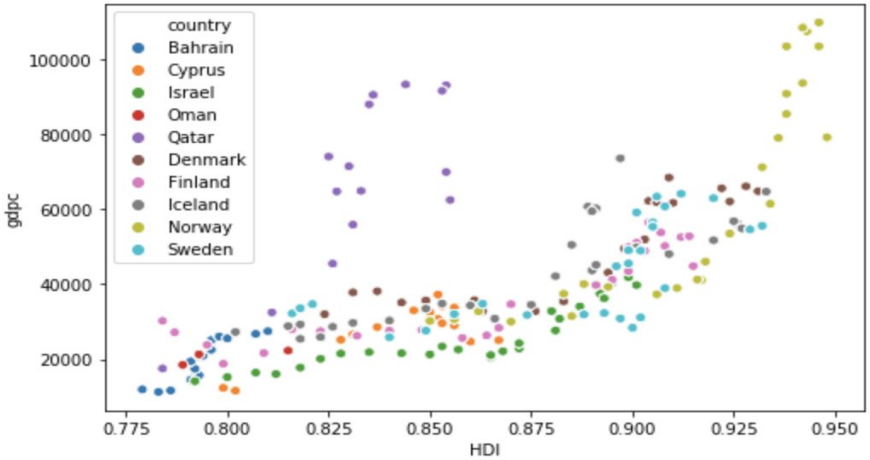


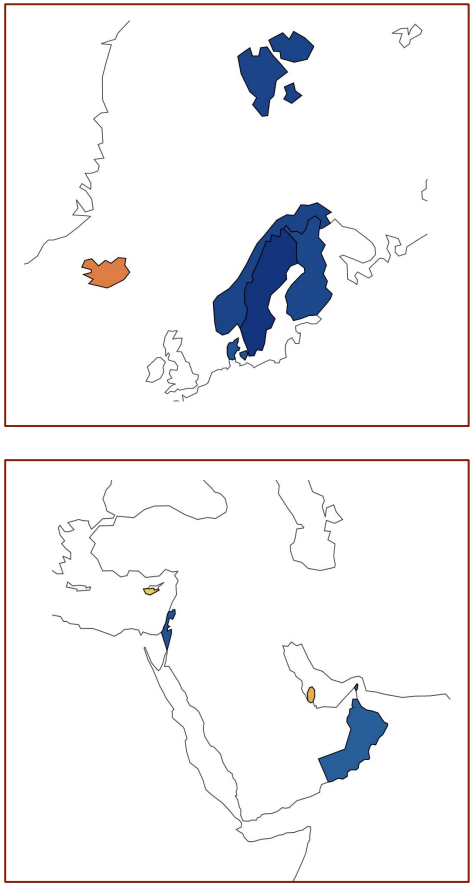
Fitting Model

Bahrain	146
Cyprus	80
Denmark	20
Finland	15
Iceland	118
Israel	20
Norway	14
Oman	25
Qatar	96
Sweden	7

Distribution of Suicide Rates







https://plot.ly/~HuaiWendy/4/zero-suicide-rates/#/

Modeling

- ➔ Model Design: OLS and GLM
- ➔ Two designed are applied to North Europe and Middle East, as well as two specific countries (Israel, Cyprus)
- ➔ For each model design we performed cross validation to see their predicting ability
- ➔ To further explore, we did one more the procedure after removing zero suicide rate. This increases the fit to our models and potential correlation between suicide rate and predictors but may compromise the completeness of the data. After removing zero, model assumptions is improved

Conclusion

- Generally, **age, gender, generation, GDP per capita** as well as **HDI** are all significant predictors of suicide rate. But in different areas, they may have different effect.
- In the case of our design, catagorical factors have similar effect in two regions.
- For these two numeric variables (HDI and GDPC), while the countries in North Europe follows an overall specific pattern (higher HDI and GDP per capita lead to lower suicide rate), Middle East countries varies significantly.

- Males and aged people are more likely to suicide
- For all age groups, North Europe has generally higher suicide rate
- GDP and HDI are closely related but how they are related to suicide rate is region-specific.