

IST 707: Data Analytics

World Happiness Report Analytics

Samantha Brennen-Lisko, Holden Herrell, Jogesh Pugazhendhi, & Matthew Sutherland

Topics

- About the Data
- Exploratory Analysis
- Models
- Results
- Conclusions

About the Data

World Happiness Report

Source: Kaggle

(<https://www.kaggle.com/unsdsn/world-happiness>)

Description:

Data set ranking the happiness score of 155 countries around the world. Released annually resulting from Gallup polls.

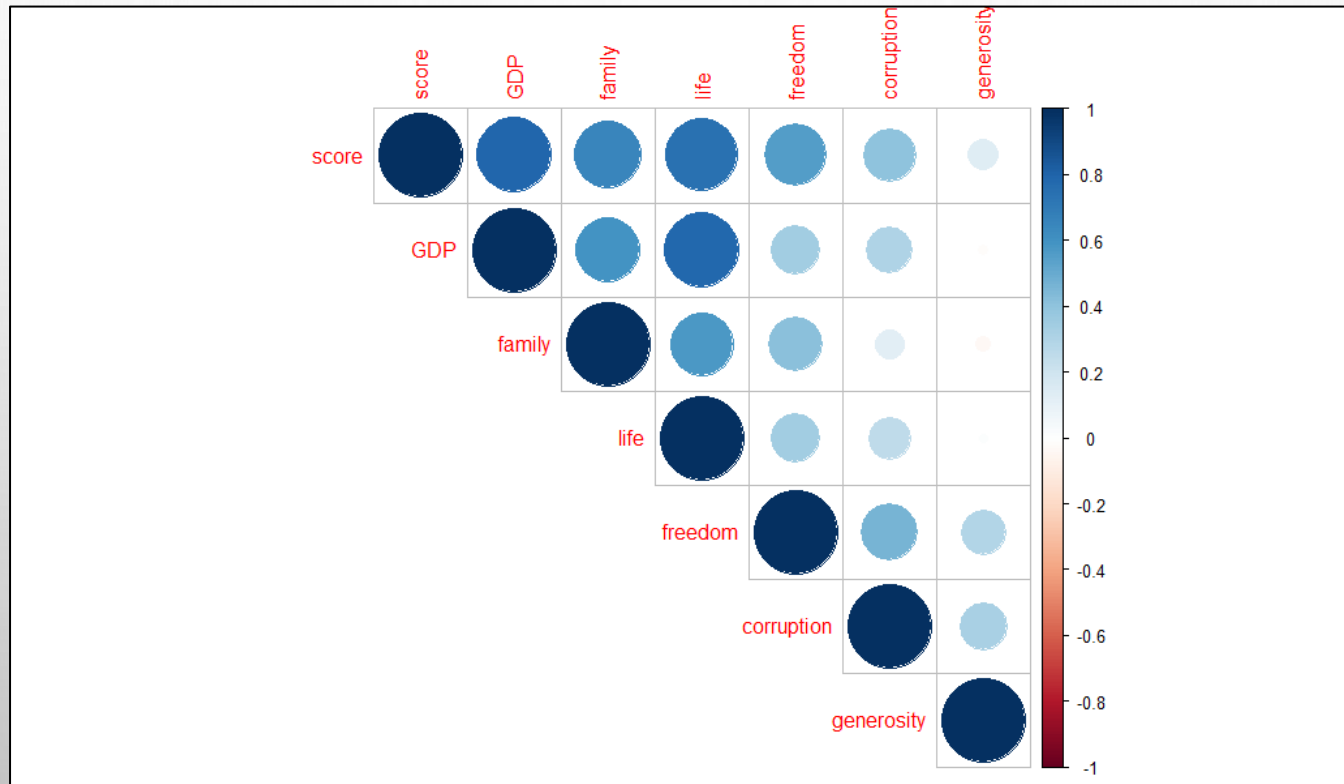
Key Fields: (Indexes) GDP per capita, social support, healthy life expectancy, freedom to make life choices, generosity, and perceptions of corruption

About the Data (cont'd)

- Data consisted of 2015-2019 World Happiness Report survey results
- Not all years had same data fields
- Some partially existing fields were added (i.e. continent) to years where they were missing
- New fields were generated to support modeling (Discretized Happiness score i.e. 3 to 4)

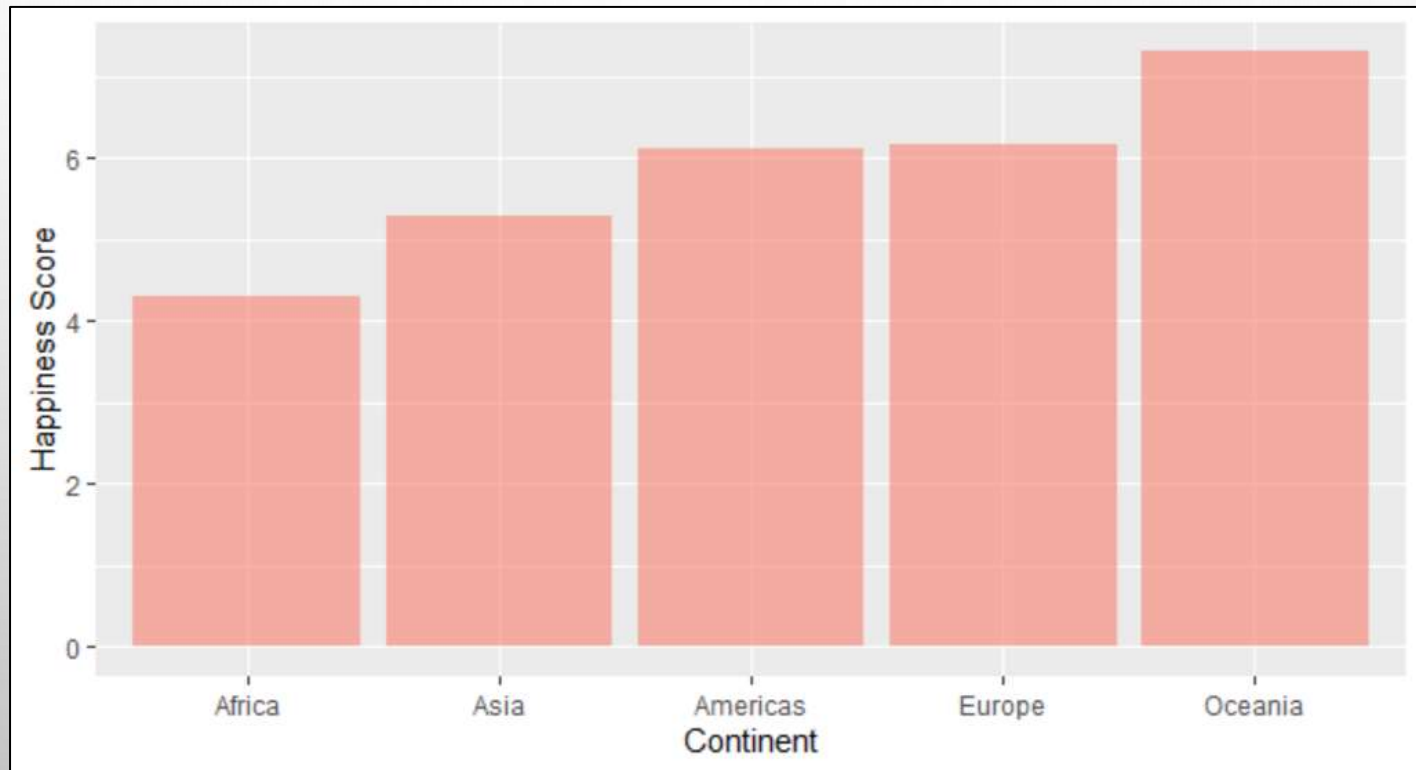
Exploratory Analysis

- Correlation of attributes



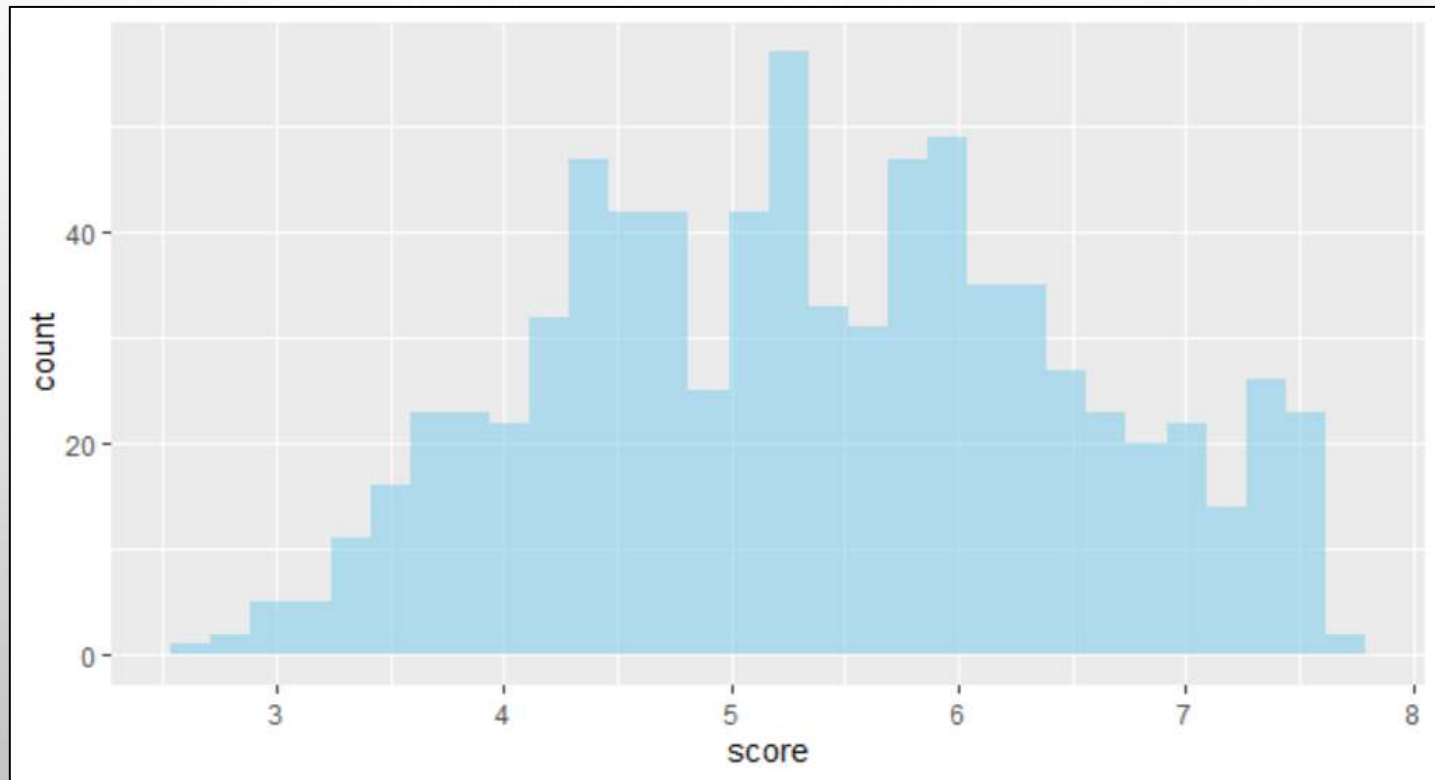
Exploratory Analysis

- Happiness Score by continent



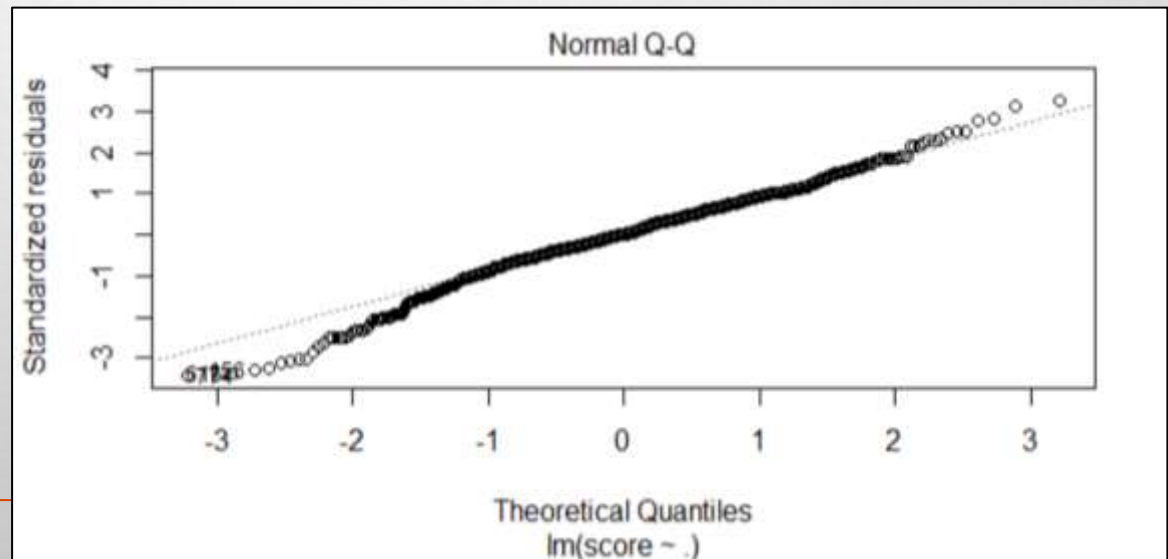
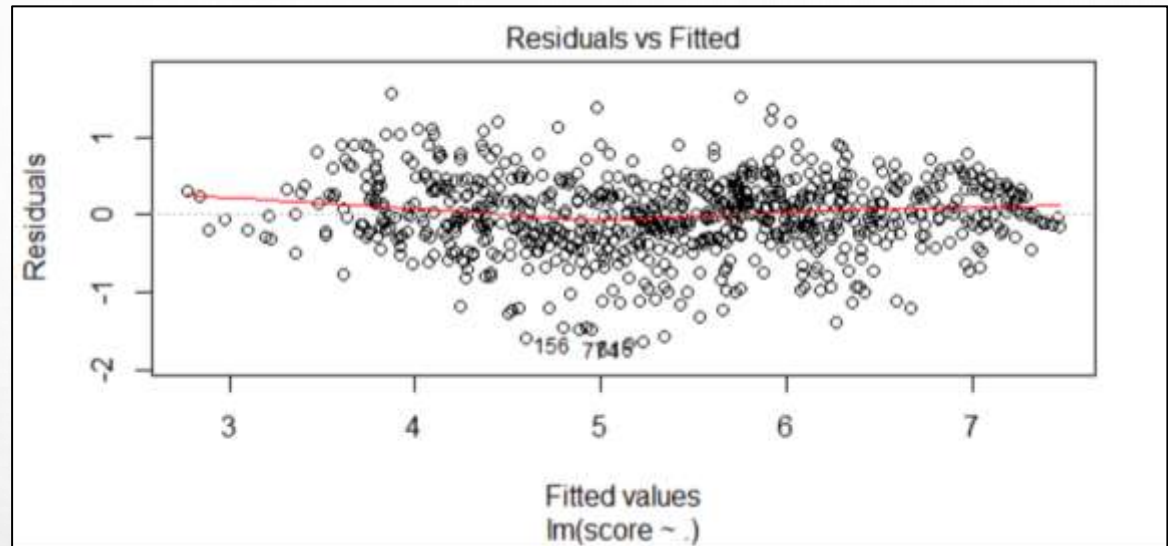
Exploratory Analysis

- Happiness Score distribution



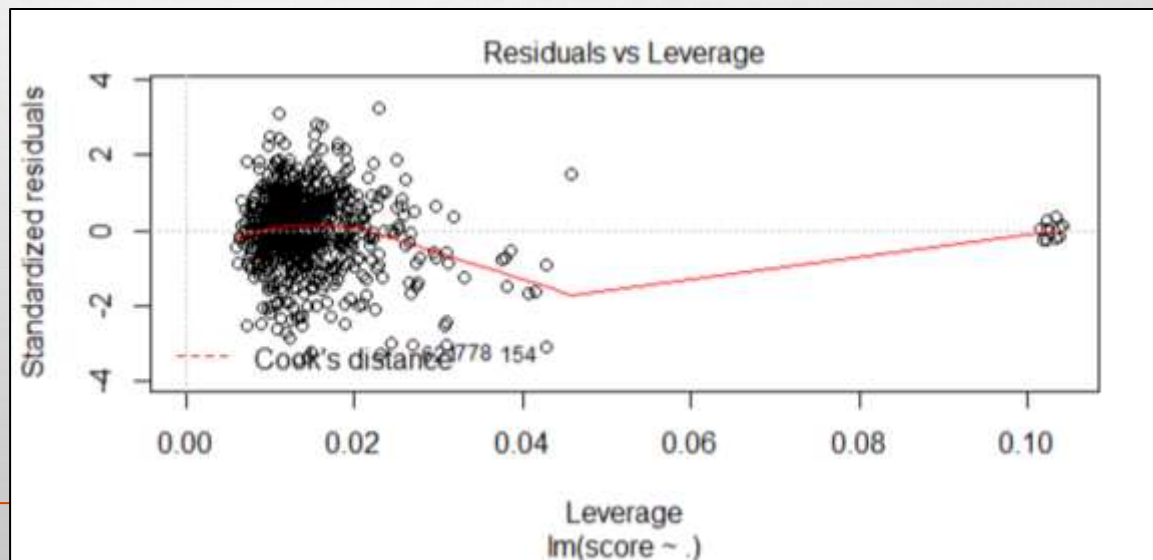
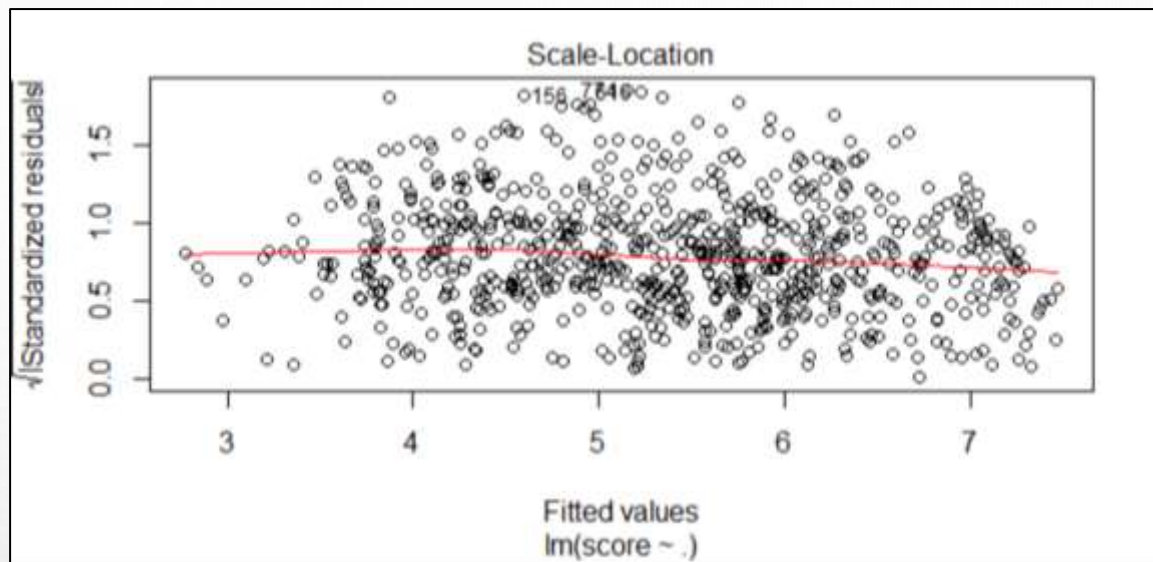
Models—Linear Regression

- RMSE =
0.4945774



Models—Linear Regression

- RMSE =
0.4945774



Models—Random Forest

Models—SVM

Models—Naïve Bayes

Models—Decision Tree

Results

Conclusions
