

World Happiness Report Dataset

# Data Visualization and Prediction

CZ1015 INTRO TO DATA SCIENCE  
MINI-PROJECT PRESENTATION

DONE BY: XIAO YANG  
WONG CHUN FOONG  
KEANE NGUYEN KIM XUYEN

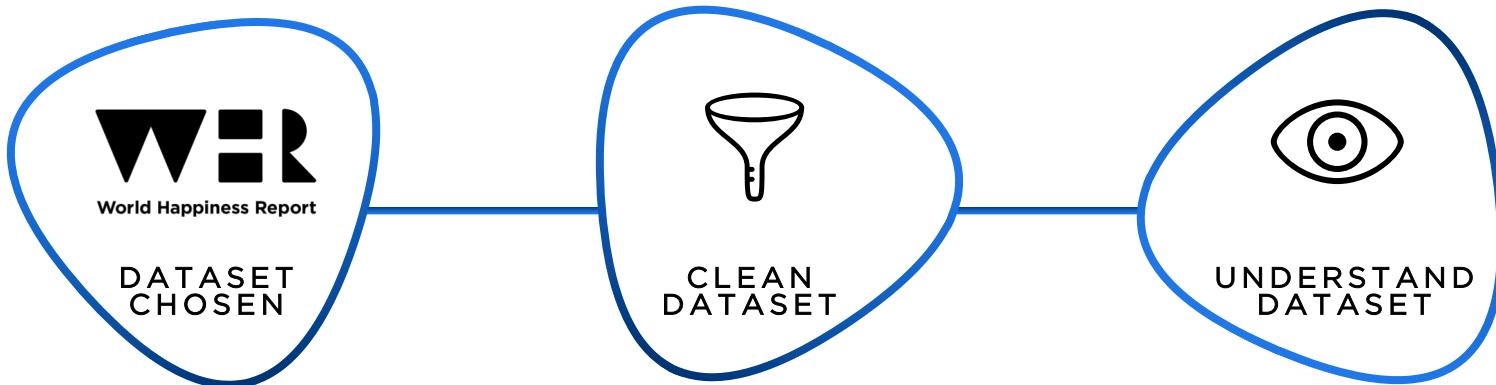


First, let's look into our...

# Background

*what will be the*

World's Happiness Score in the **next 5 years?**



First, we choose the  
2019 WHR dataset

Next, we prepare the dataset  
by filling N.A.s with Os and  
mapping regions and country  
codes to respective country

Then, we use the data  
to visualize and predict  
the data to answer our  
above question

**Visualization**

**Analysis**

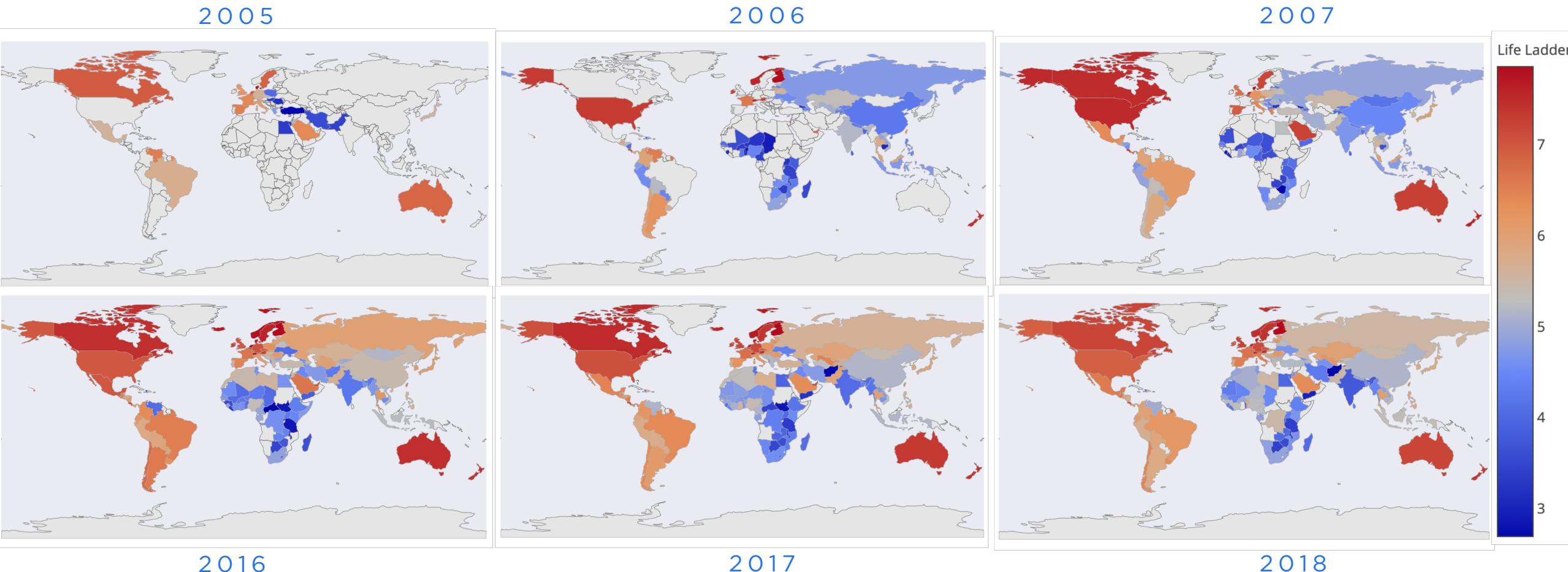
**Prediction**

**Outcome**

**Conclusion**

Now, let's take a look at our...

# Visualization



2016

2017

2018

Background

Analysis

Prediction

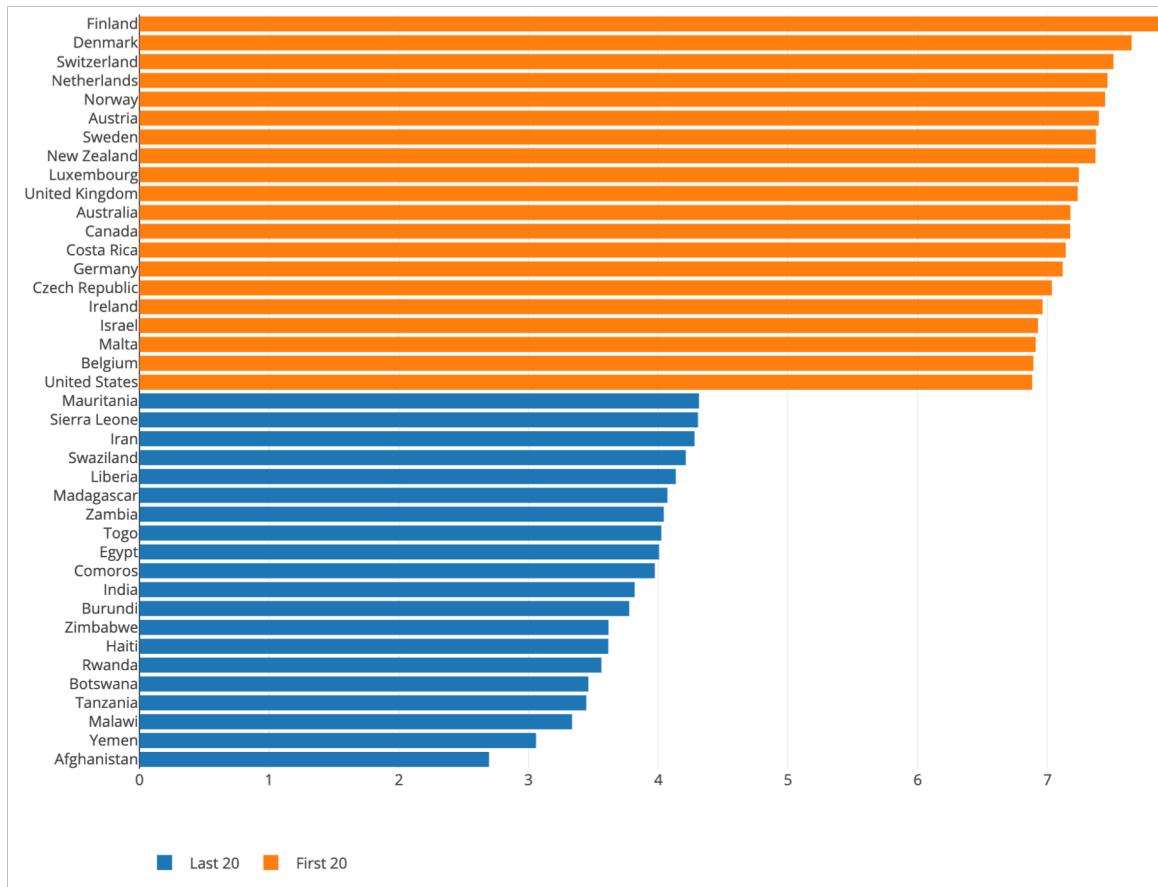
Outcome

Conclusion

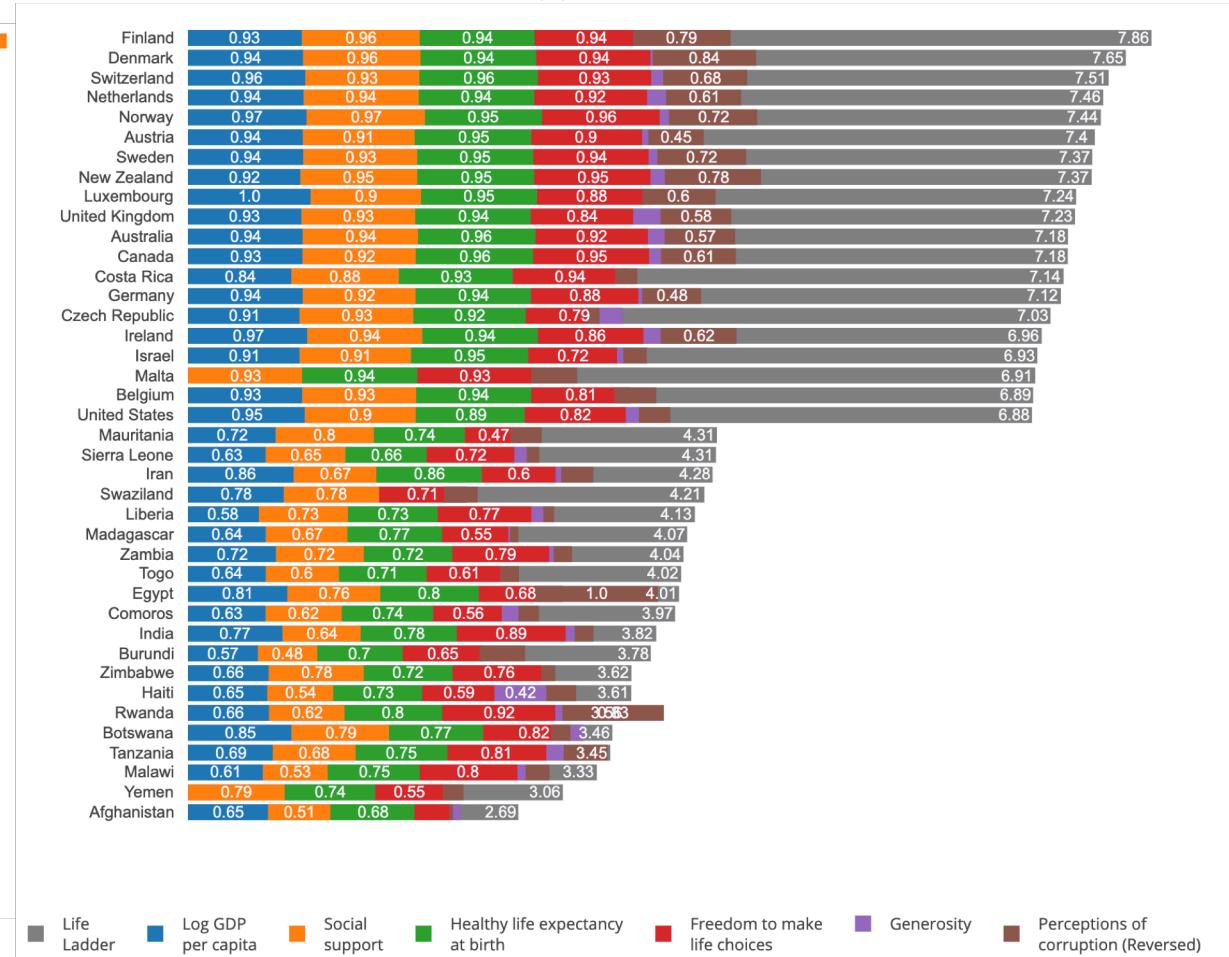
Now, let's take a look at our...

# Visualization

Countries' Happiness Scores in 2018 (First and Last 20)

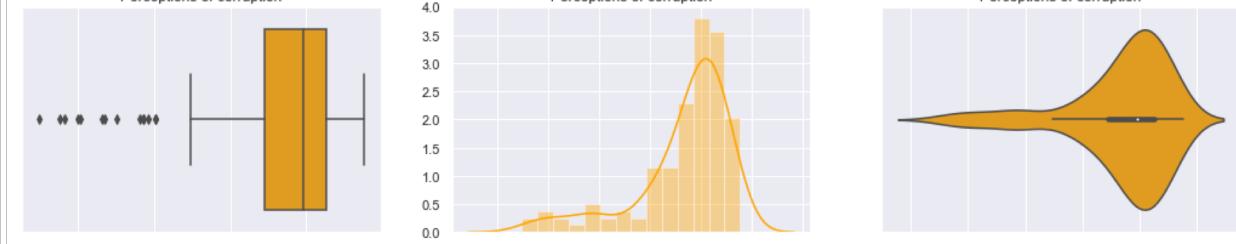
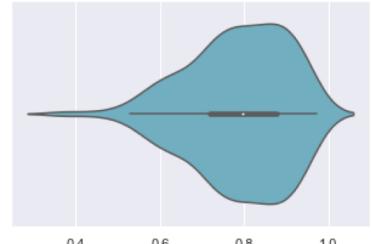
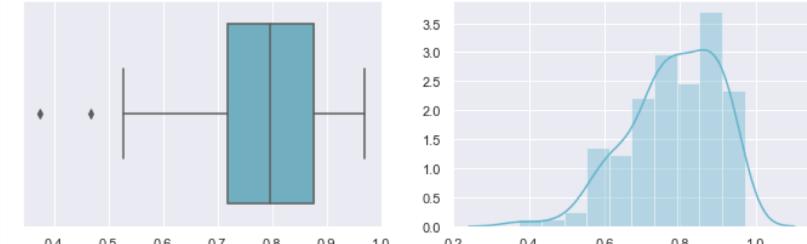
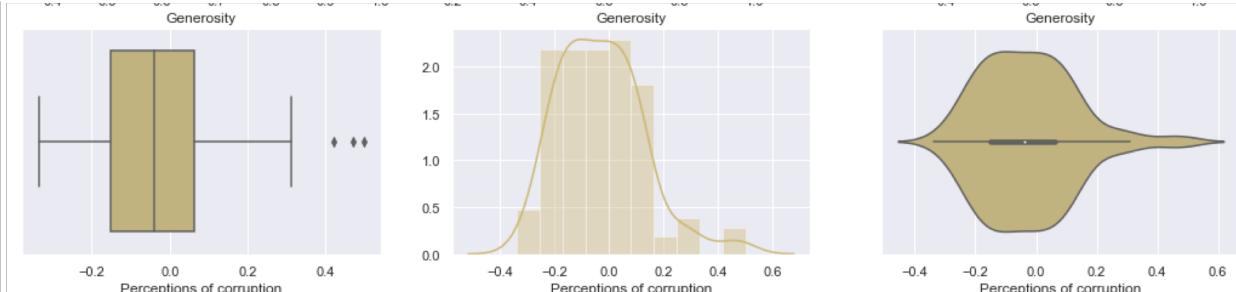
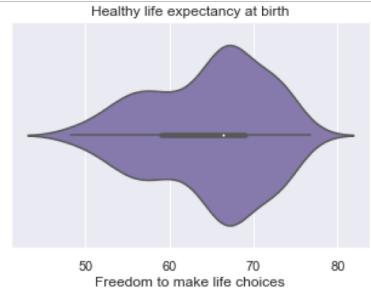
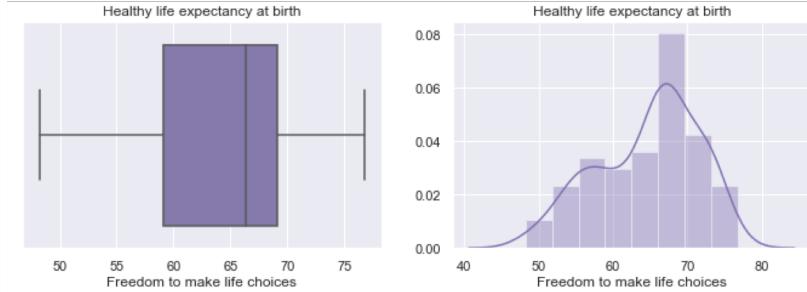
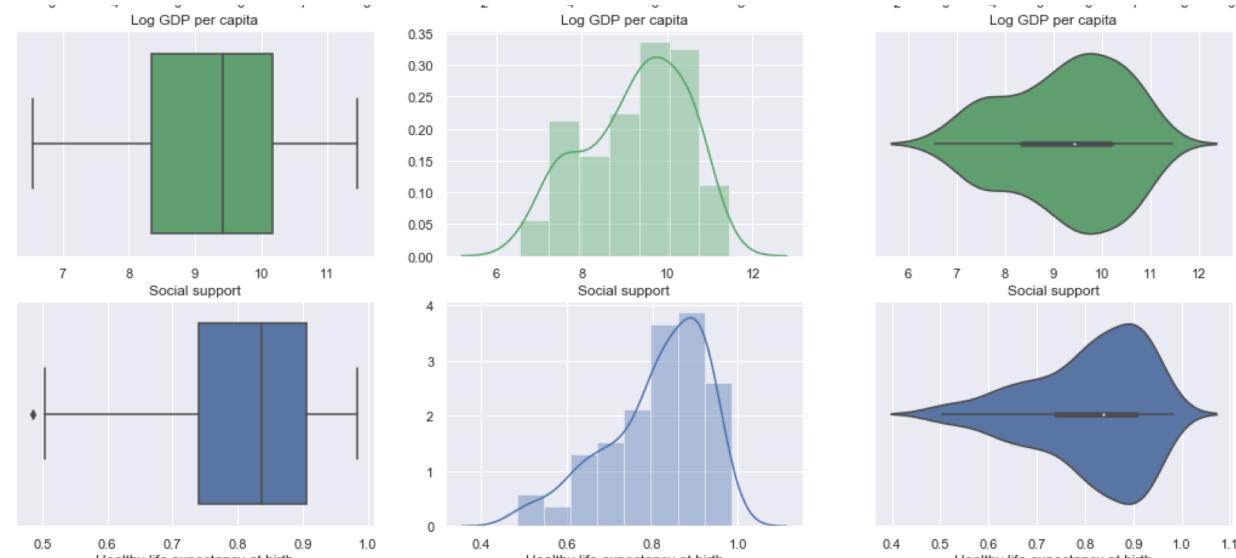
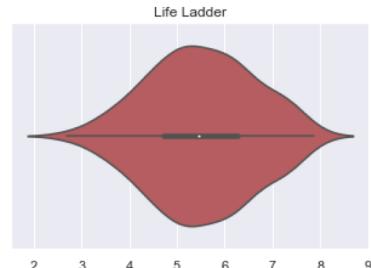
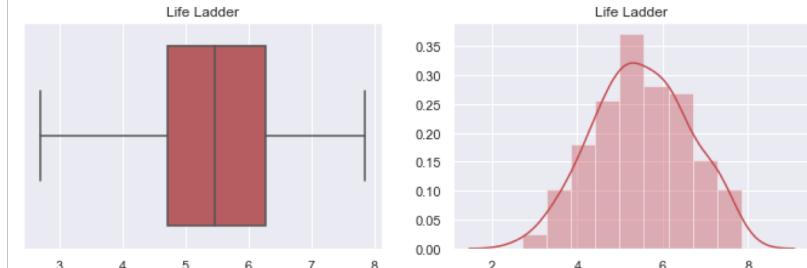


Breakdown of Countries' Happiness Scores in 2018 (First and Last 20)



Now, let's take a look at our...

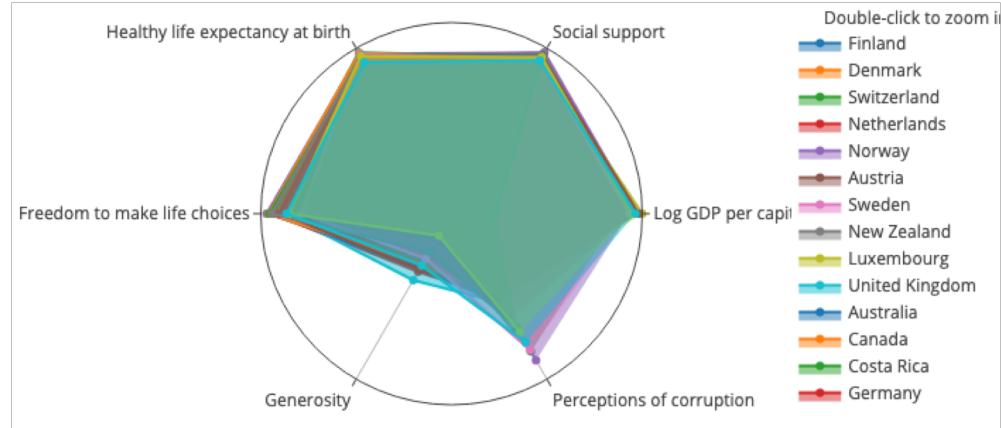
# Visualization



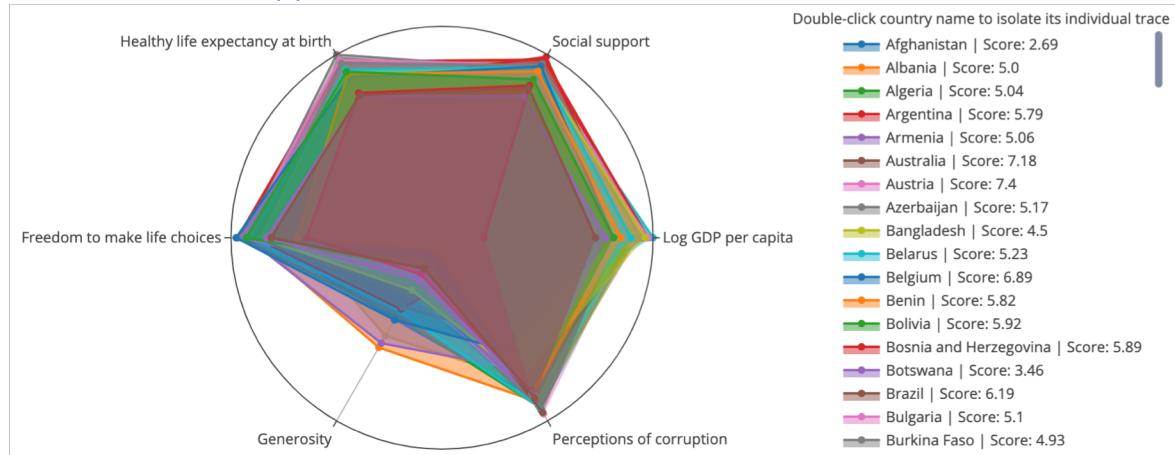
Now, let's take a look at our...

# Visualization

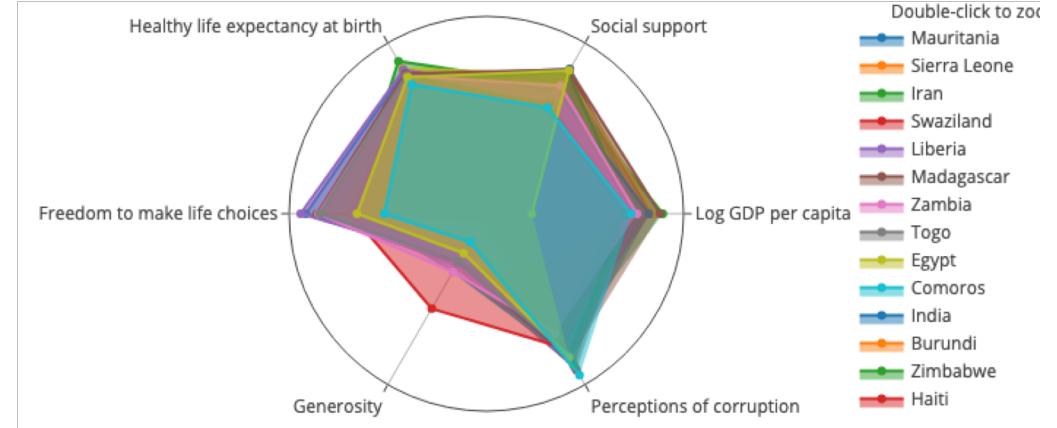
First 20 Happiness Score (Life Ladder) Breakdown into 6 Determinants



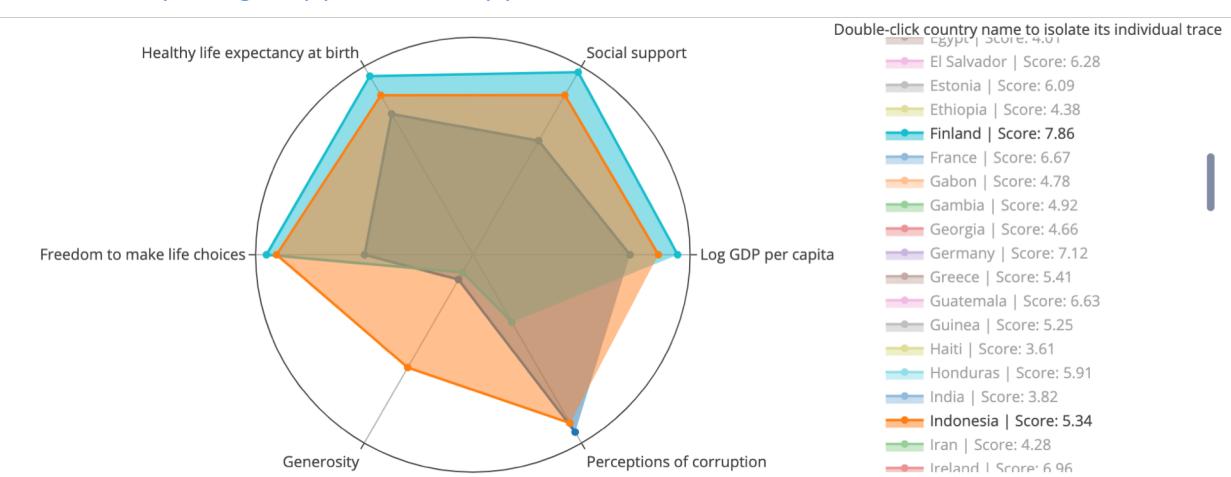
136 Countries' Happiness Score (Life Ladder) Breakdown into 6 Determinants



Last 20 Happiness Score (Life Ladder) Breakdown into 6 Determinants

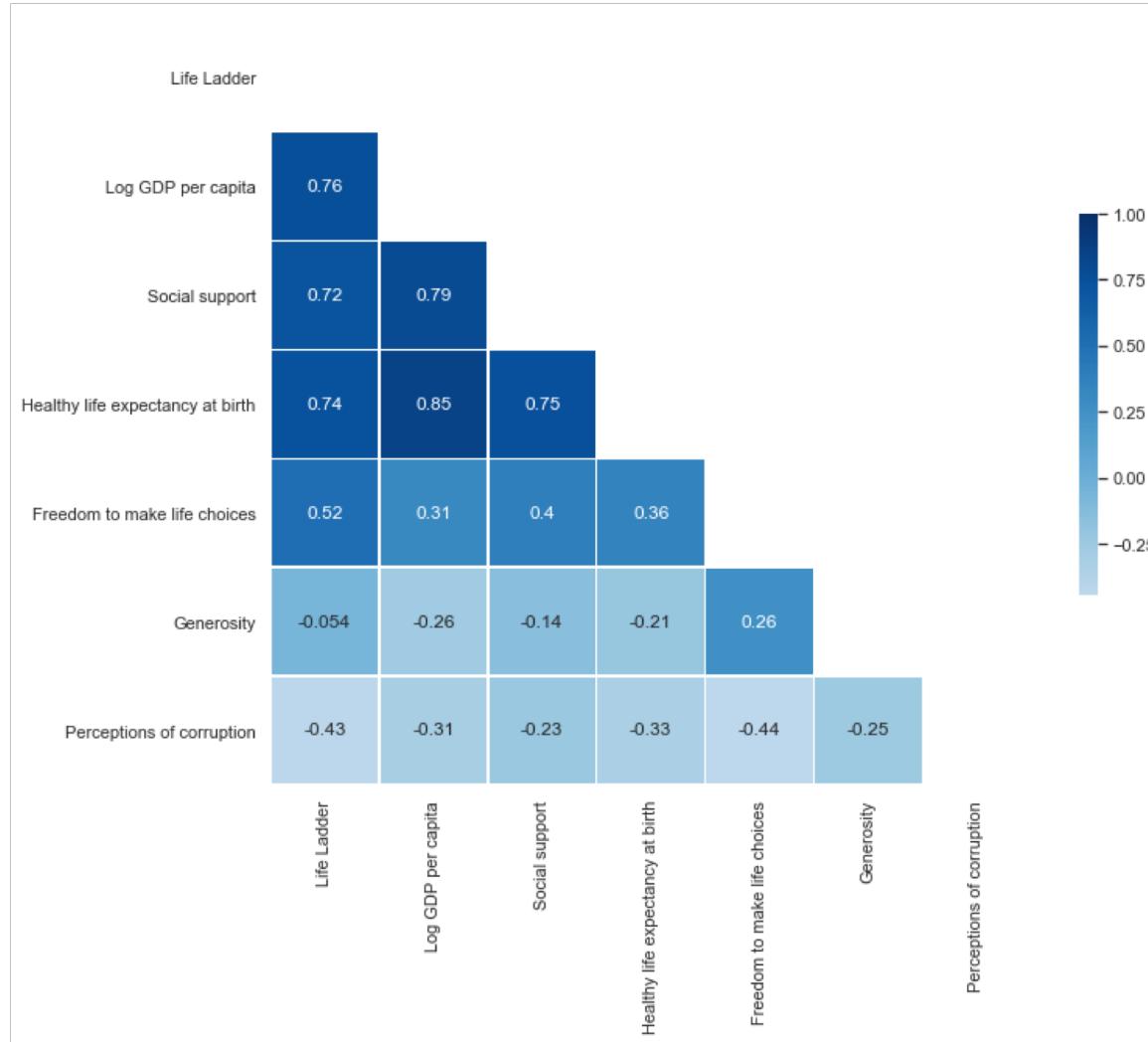


Comparing Happiest, Unhappiest, and Most Generous Countries



Now, let's take a look at our...

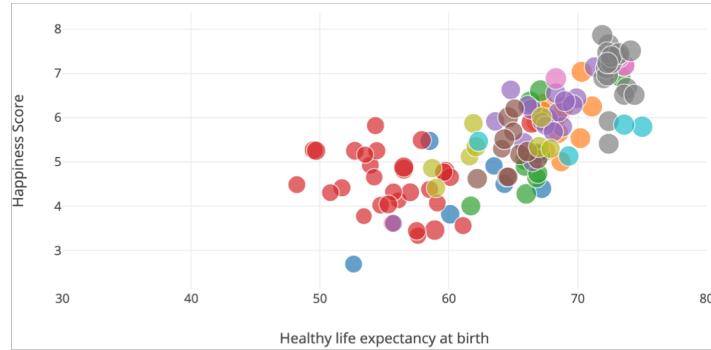
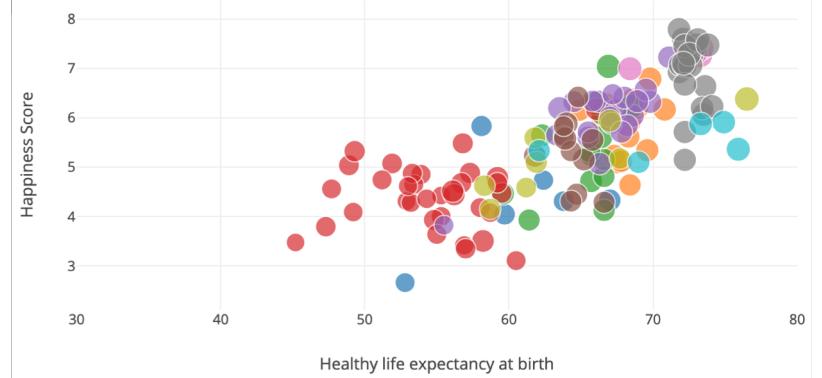
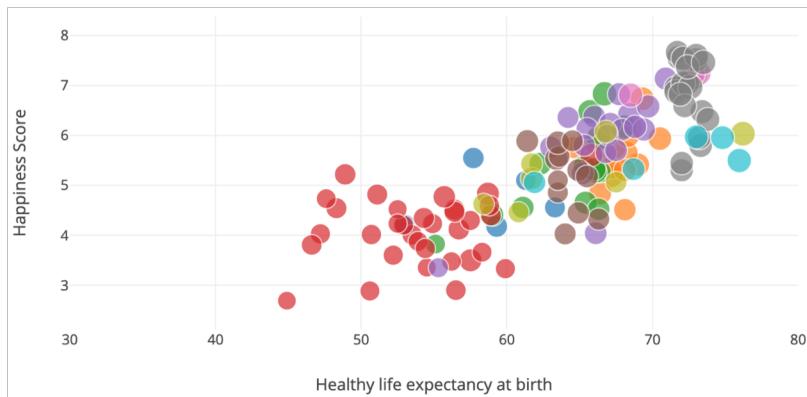
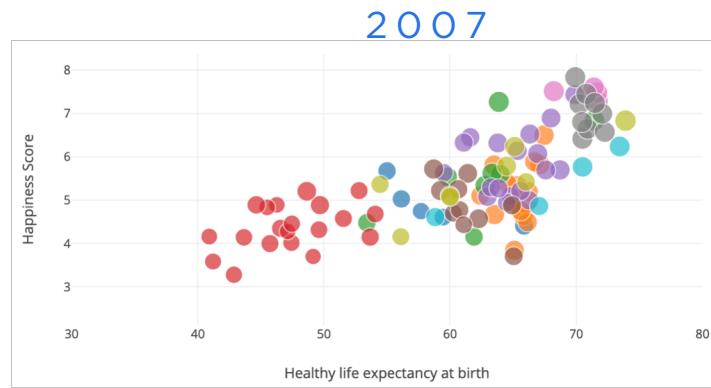
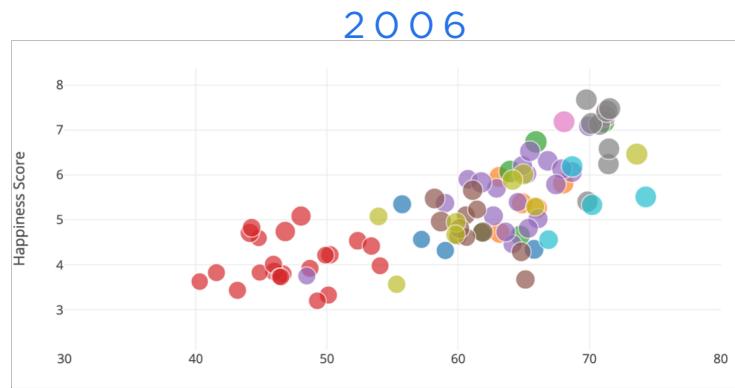
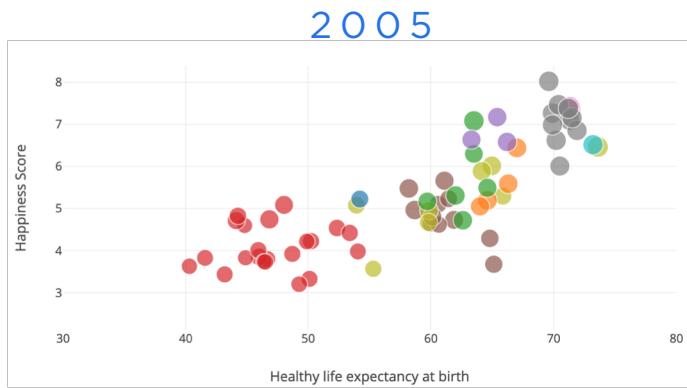
# Visualization



Now, let's take a look at our...

# Visualization

- South Asia
- Central and Eastern Europe
- Middle East and North Africa
- Sub-Saharan Africa
- Latin America and Caribbean
- Commonwealth of Independent States
- North America and ANZ
- Western Europe
- Southeast Asia
- East Asia

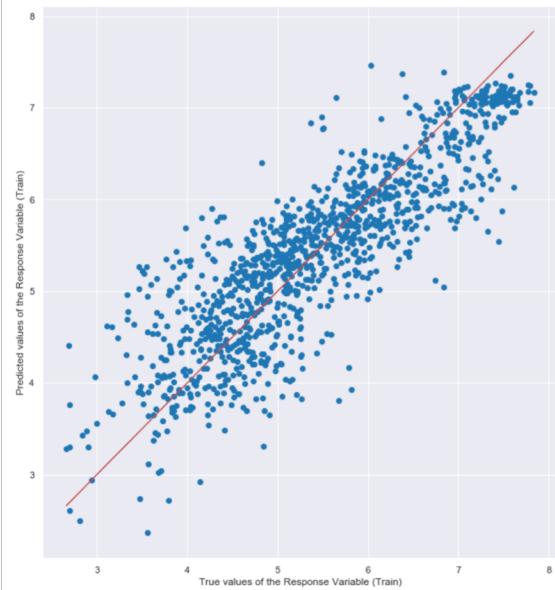


Now, let's take a look at our...

# Prediction

```
Intercept of Regression : b = [-1.83472056]
Coefficients of Regression : a = [[ 0.31581404  2.3784572   0.03292258  1.02872446  0.79403188 -0.52800636]]

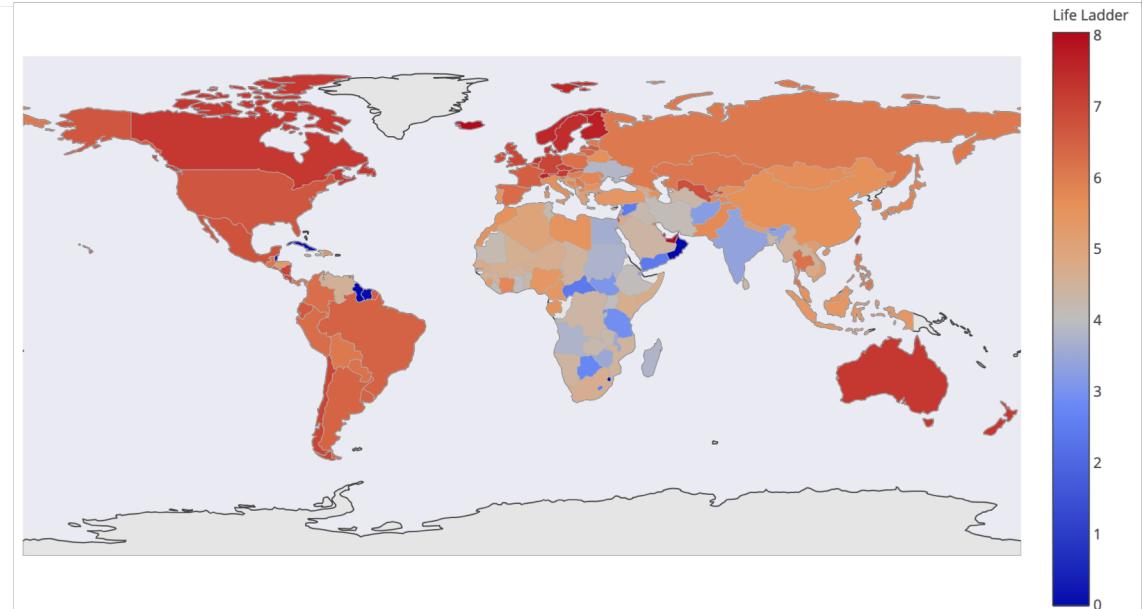
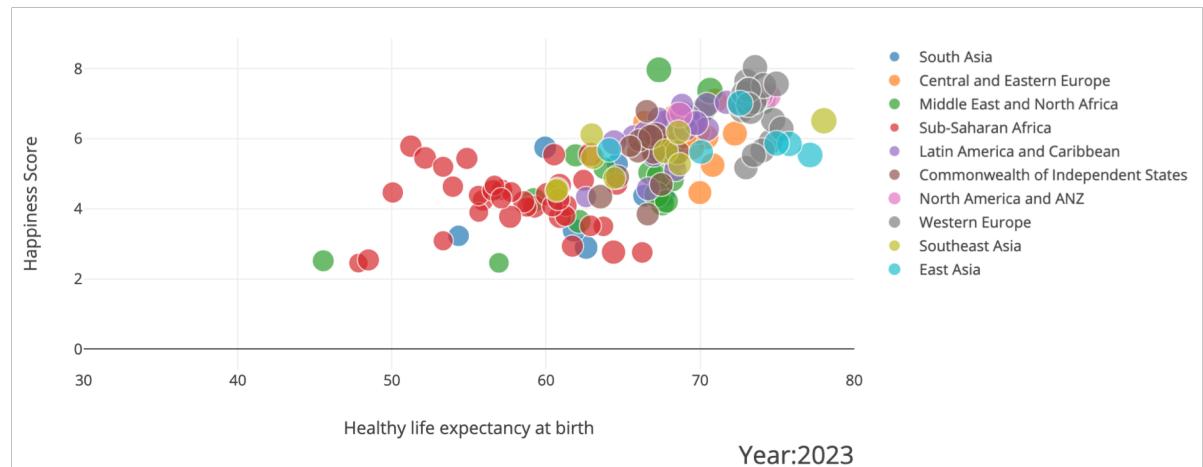
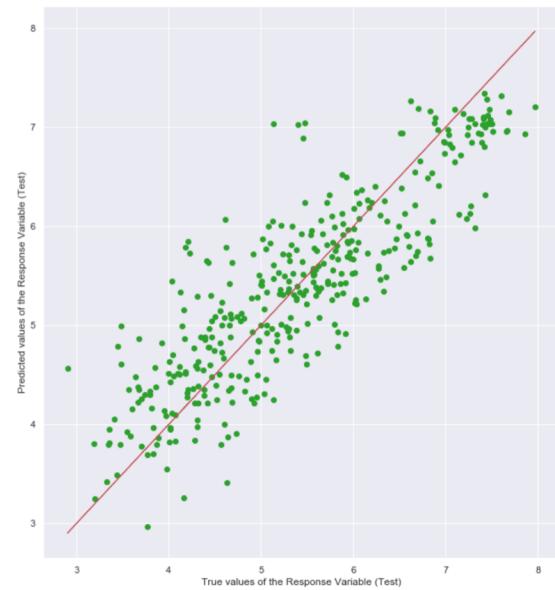
Predictors      Coefficients
0    Log GDP per capita      0.315814
1    Social support          2.378457
2  Healthy life expectancy at birth 0.032923
3    Freedom to make life choices 1.028724
4    Generosity              0.794032
5  Perceptions of corruption -0.528006
```



Goodness of Fit of Model	Train Dataset
Explained Variance ( $R^2$ )	: 0.7320339621598255
Mean Squared Error (MSE)	: 0.3432547484993792

Goodness of Fit of Model	Test Dataset
Explained Variance ( $R^2$ )	: 0.7454035667560694
Mean Squared Error (MSE)	: 0.33396859820844754



So, what is our...

# Outcome

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Did we achieve our objective  
Anything interesting



Finally, for our...

# Conclusion

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Learning points  
Challenges



Thanks for tuning in!  
**Any Question?**

## TEAM CONTRIBUTIONS

