



Marketing Health Products to the Elderly

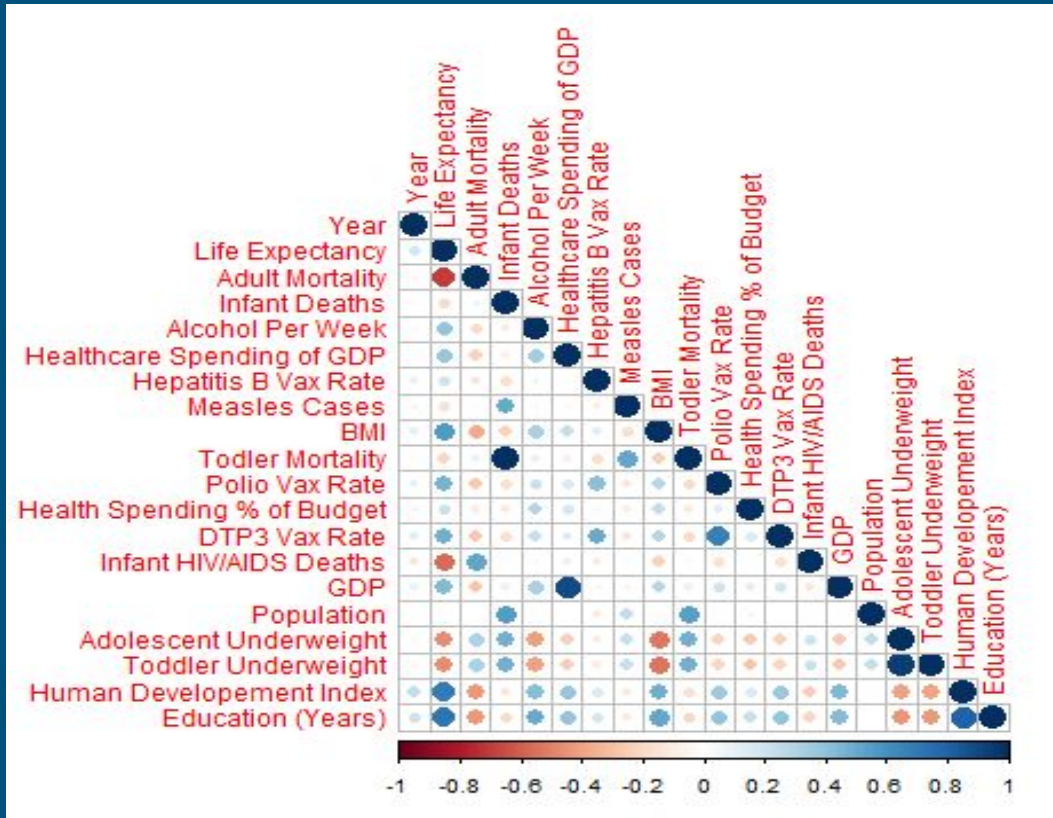


Using World Health Organization Data
to Maximize Value



Data Exploration

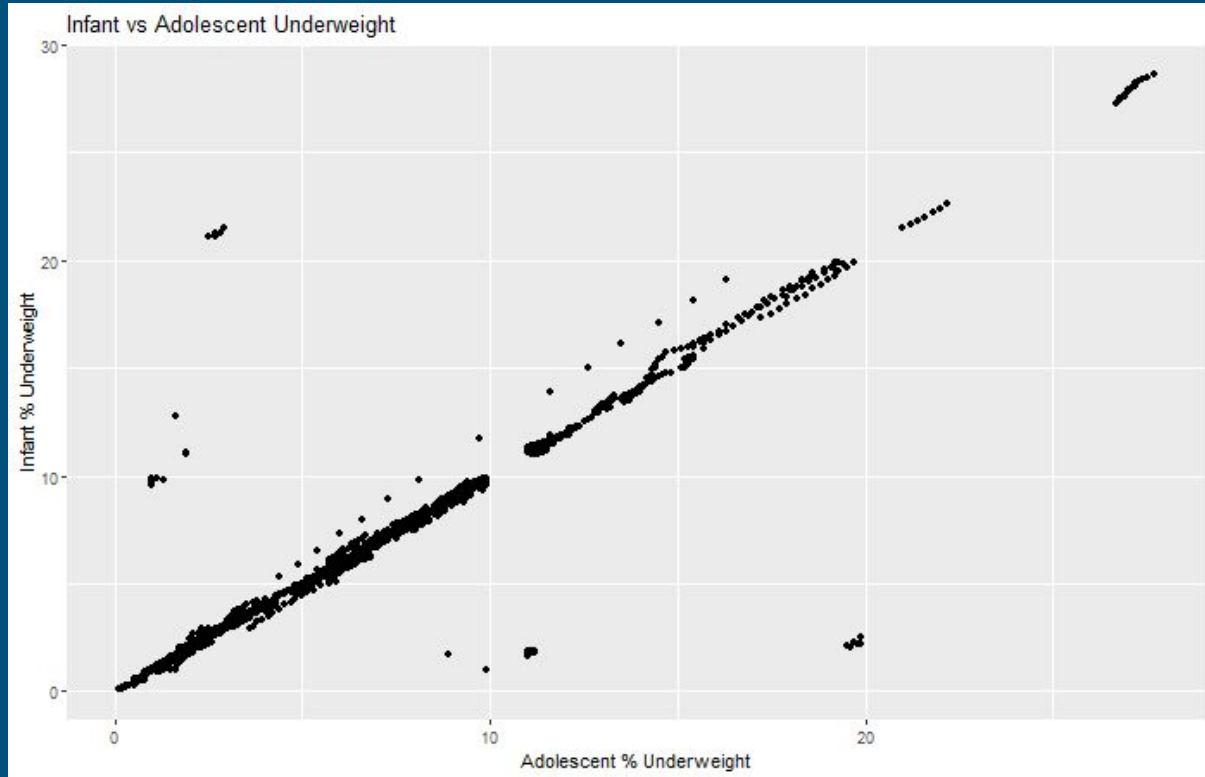
Correlation of Observations



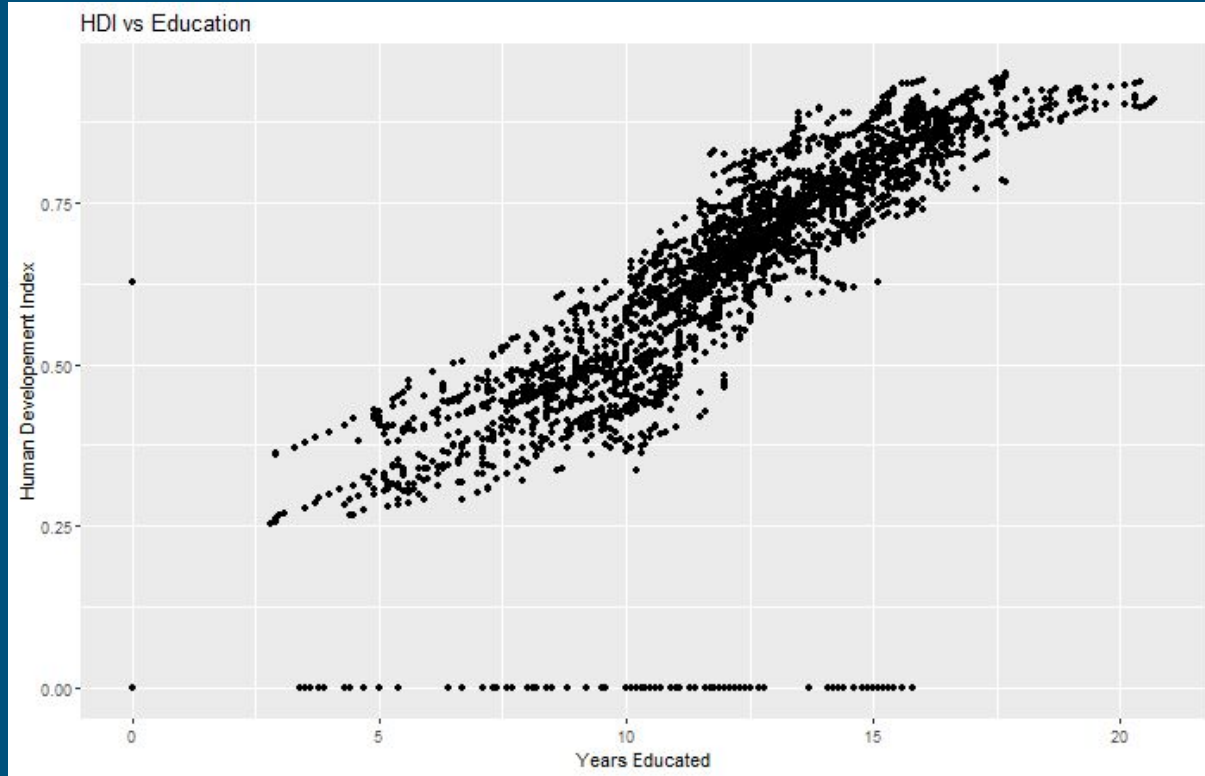
Variables with High Collinearity:

- GDP ~ Healthcare Spending
- Toddler ~ Adolescent Underweight
- Adult Mortality ~ Life Expectancy
- HDI ~ Education

'Underweight' Variables



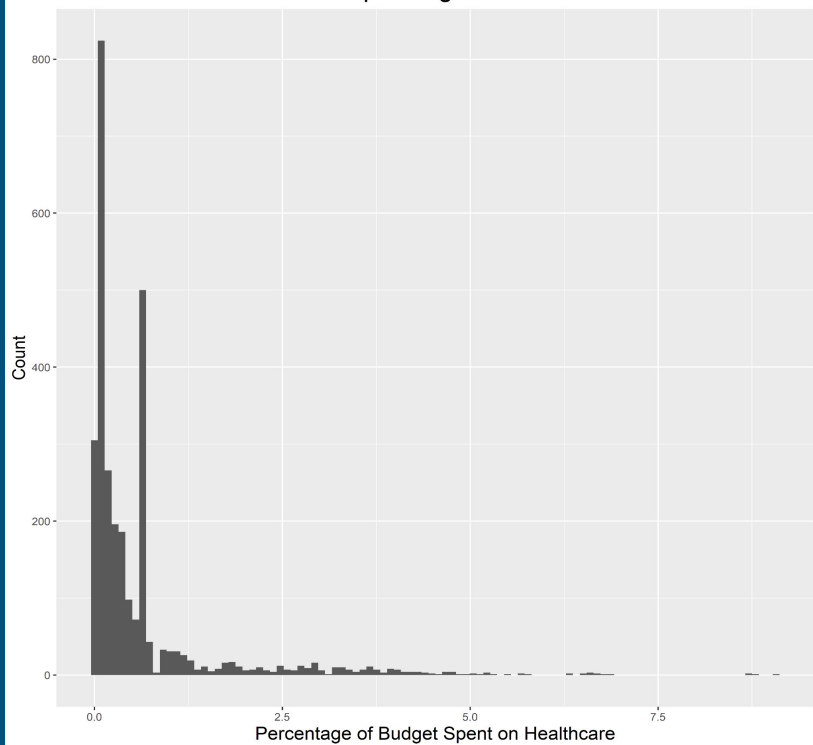
HDI and Education



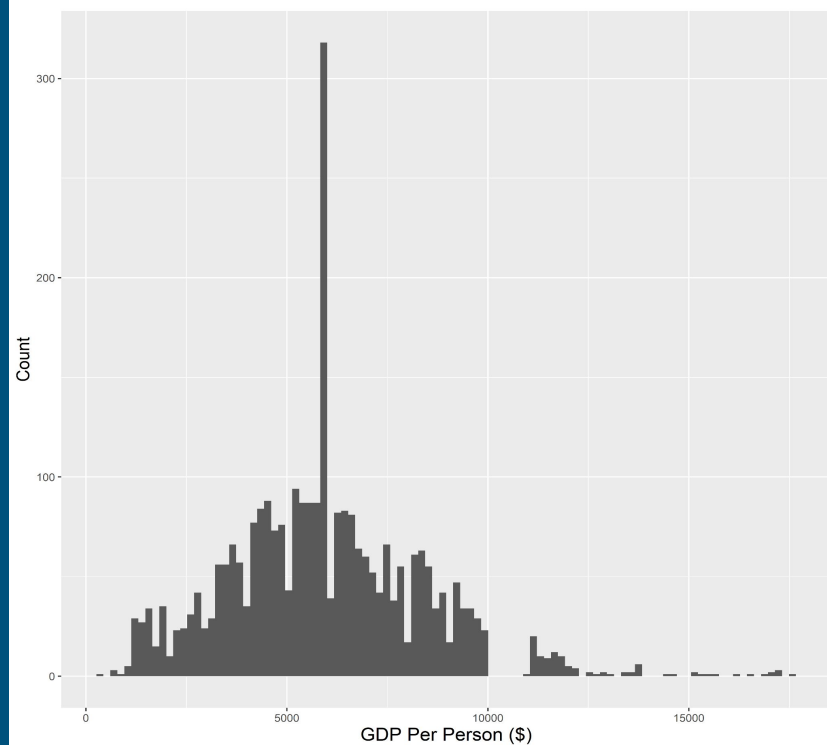
Training a Model

Which GDP Variable to Keep?

Distribution of Healthcare Spending Per Person



Distribution of GDP



Using Reason to Simplify Model

Redundant Variables and Direct Observations of Target:

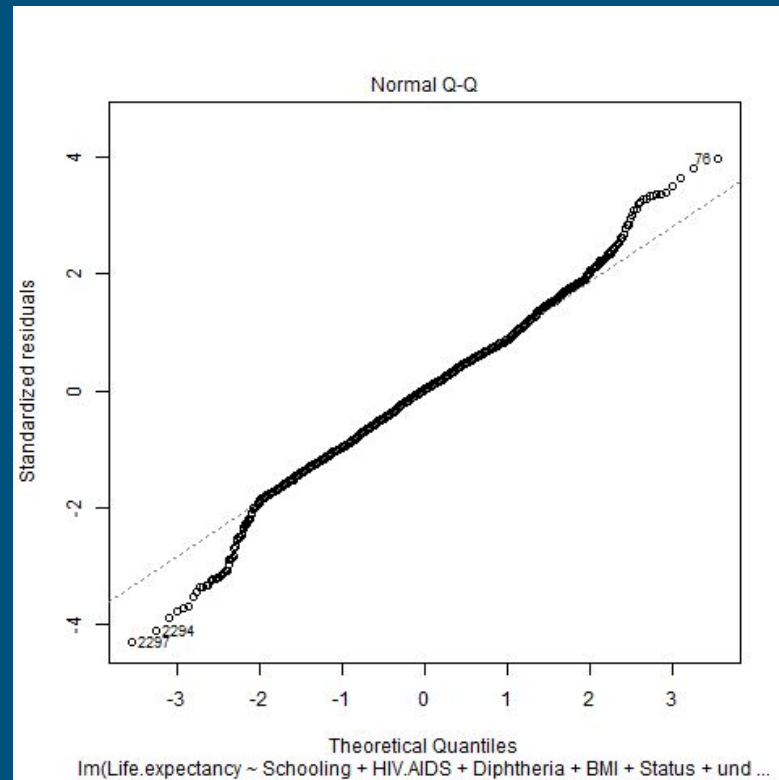
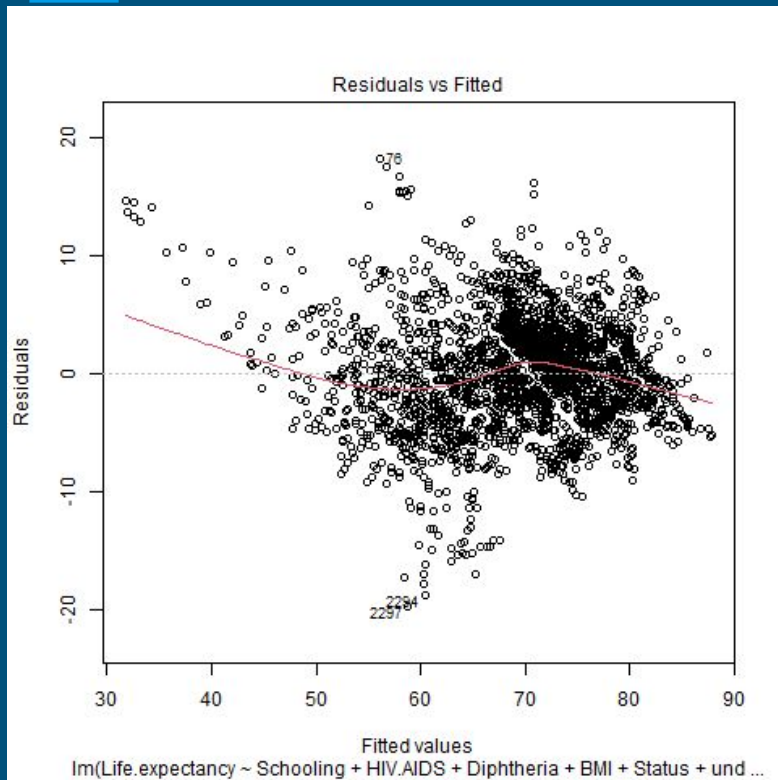
- Adult Mortality
- Infant Thinness
- Human Development Index
- Infant Mortality

Stepwise Feature Selection

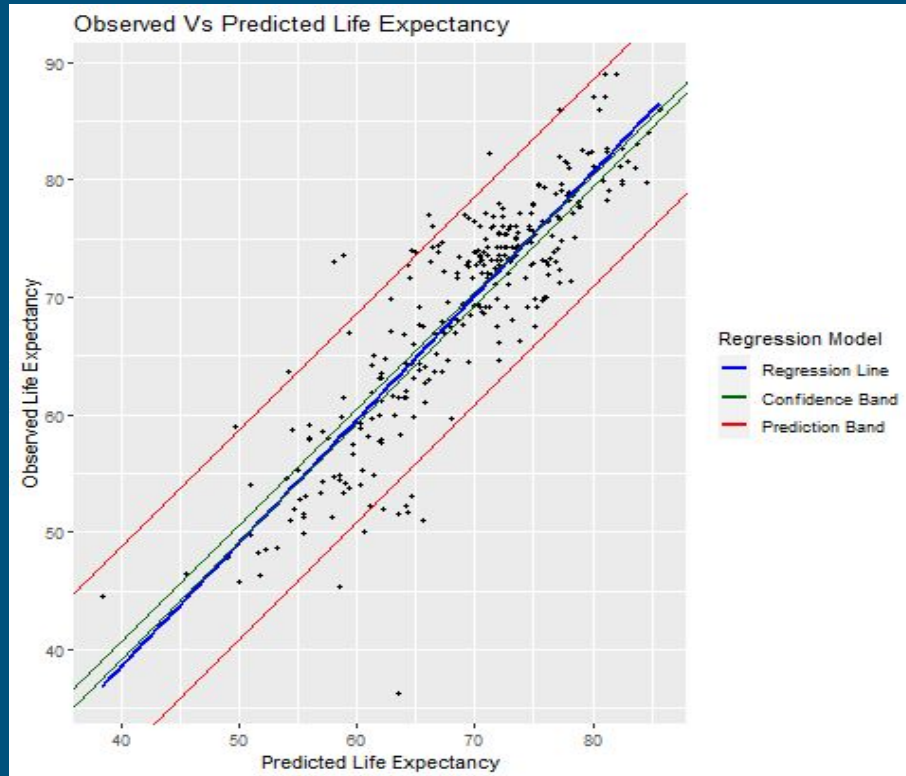
Variable	P-Value	VIF
Education	~0	1.93
Infant HIV/AIDS Deaths	~0	1.10
DTP3 Vaccination Rate	~0	2.16
Polio Vaccination Rate	~0	1.92
Hepatitis B Vaccination Rate	0.00024	1.36
Toddler Mortality	~0	1.39
GDP	~0	1.36
Adolescent Underweight Percentage	0.00013	1.62
BMI	~0	1.64
Population	0.0037	1.15

Adjusted R-Squared	0.765
F-Statistic	776.3

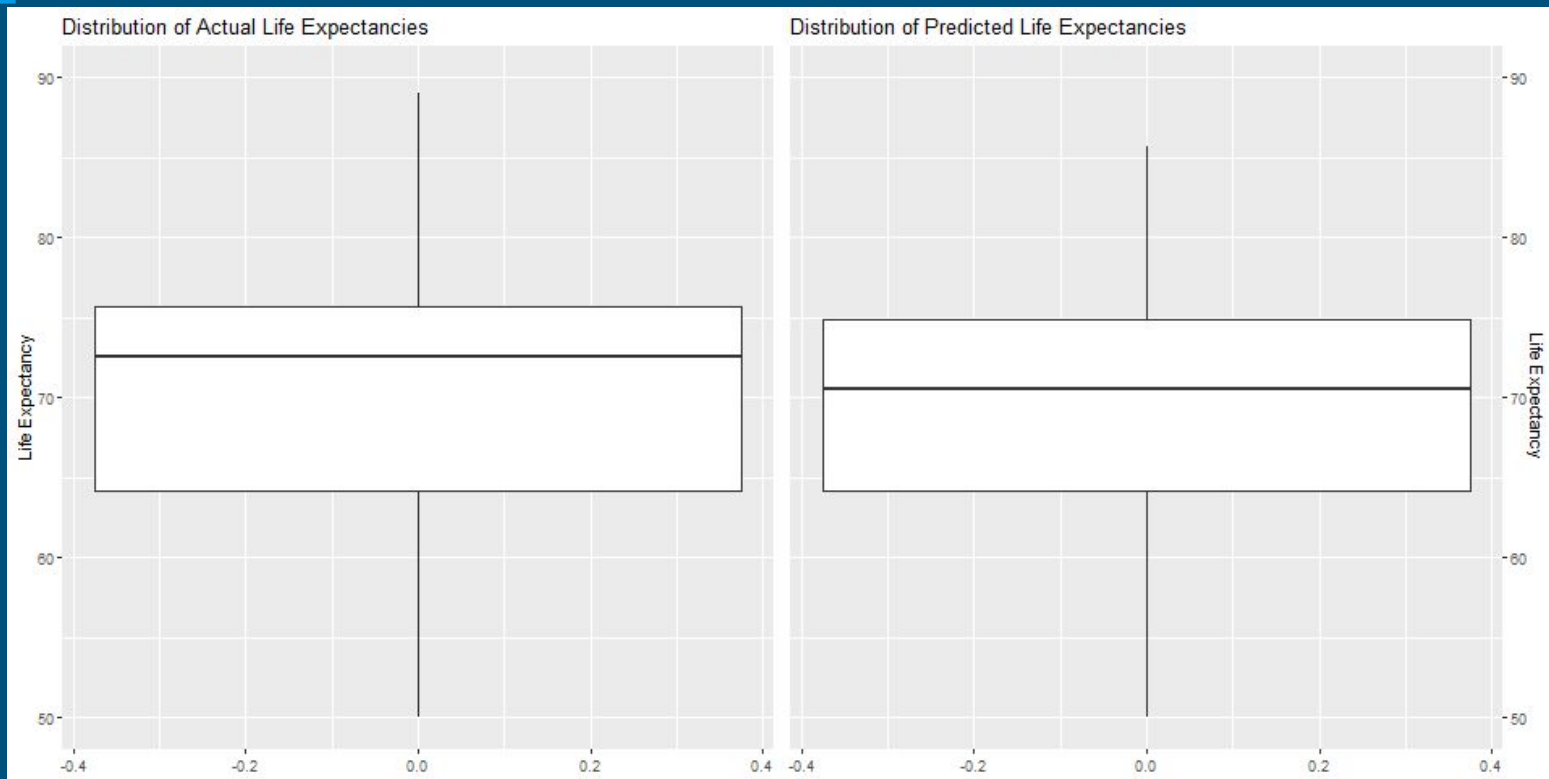
Further Analyzing Fit of Model



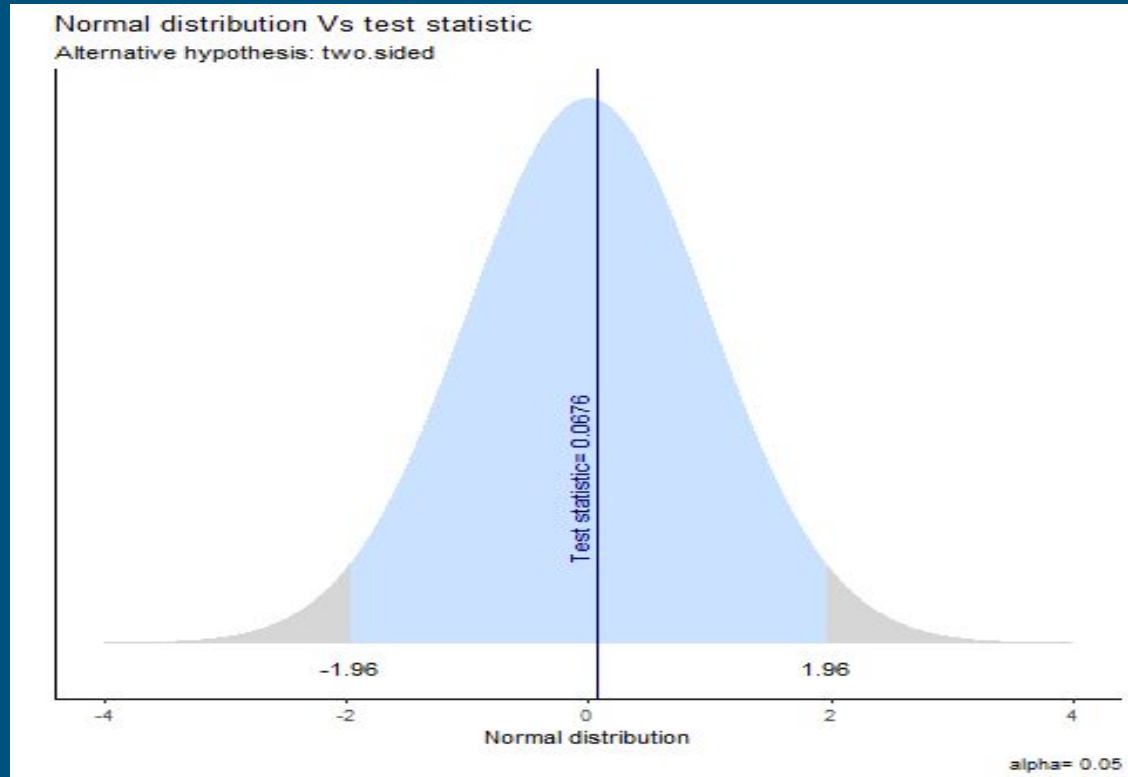
Train and Test



More Testing



2 Sample T-Test



Business Example

Finding Potential Markets for Health Insurance

What are we looking for?

Attributes of best countries for this

- High Life Expectancy
- Low government expenditure on health
- High vaccination rates
- Low alcohol consumption

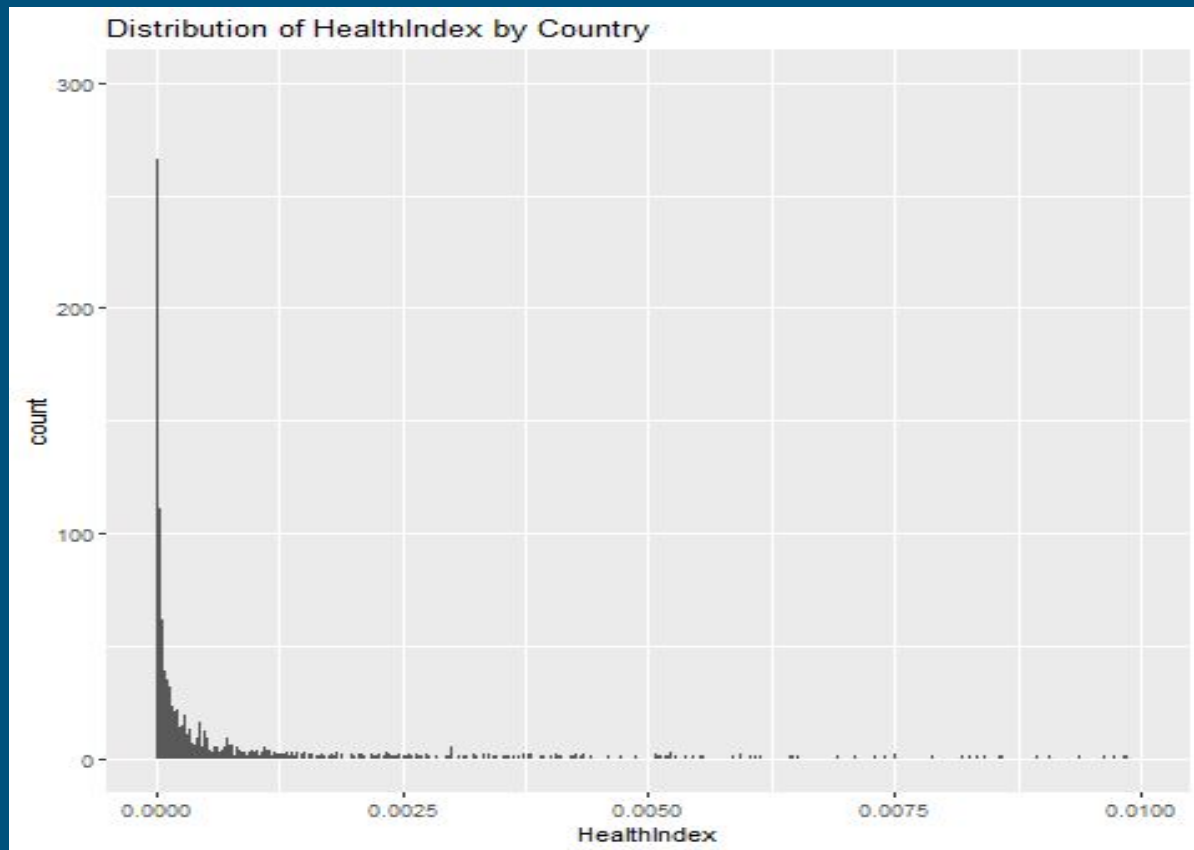
How to do this

Engineer a feature: Health Metric 0-1

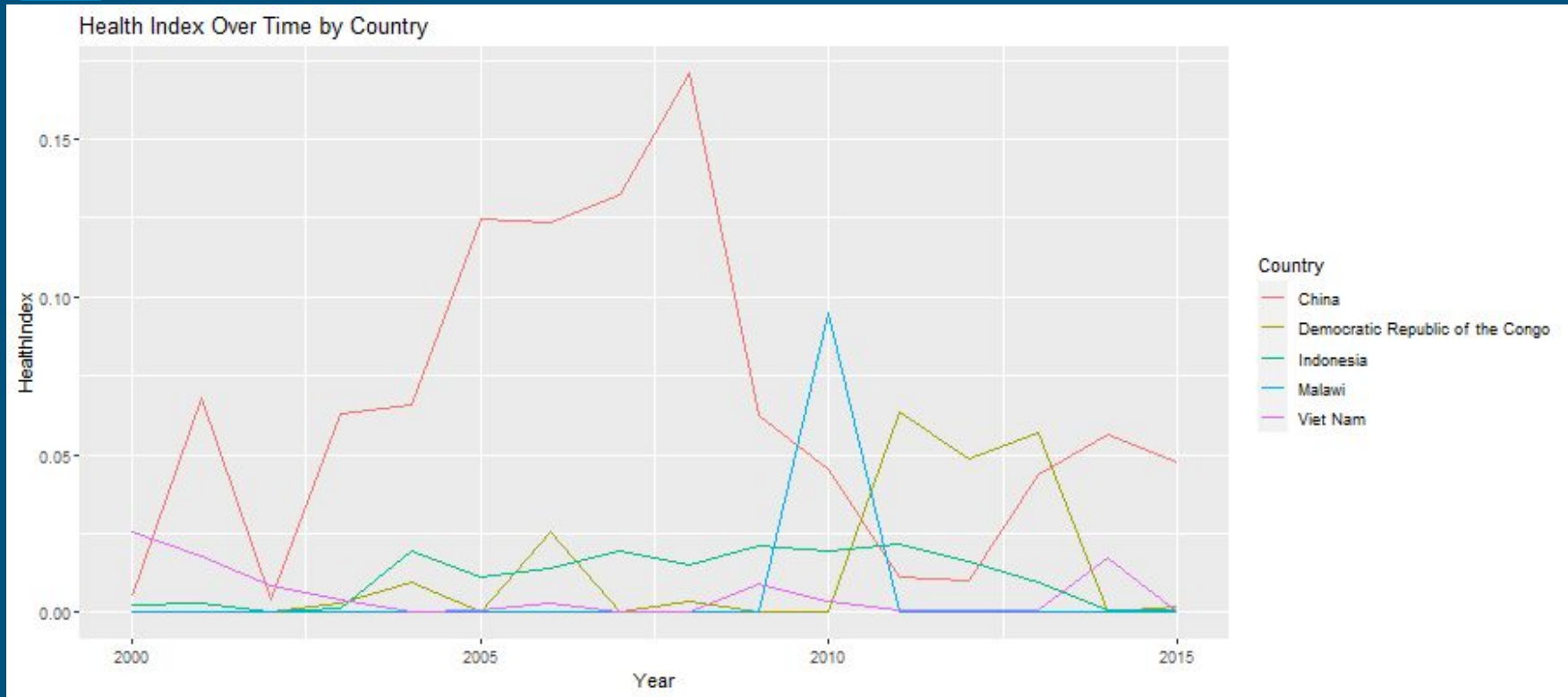
Normalize all values

Combine all metrics

Health Metric Distribution



Top 5 Highest Average Health Index



Using a Predictive Model to Guage Life Expectancy
