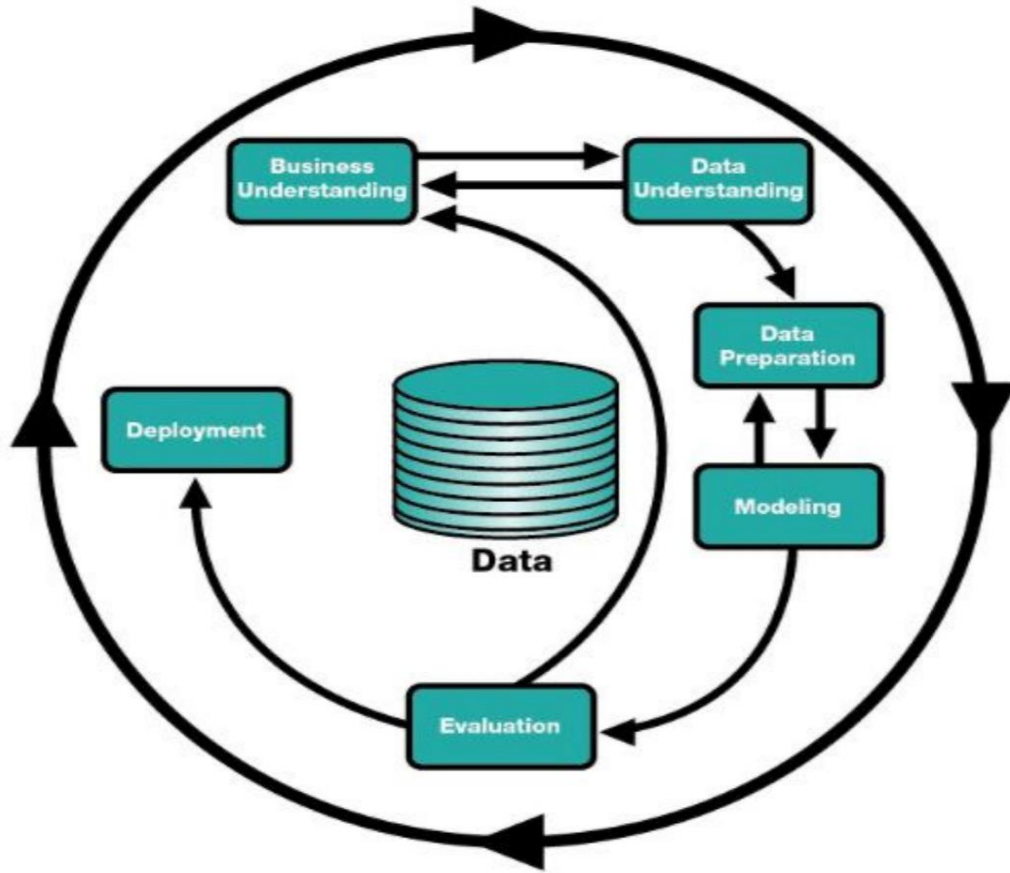# Find Your New Home In USA

Niels, Isabel and Seungwon

We are an award winning immigration consulting company and we help clients who are willing to settle down in the US. Our top priority is to suggest the best location for them and we wish them to enjoy their life with a good quality. Most of our clients are from worldwide and they are generally from a medium income group.

Good quality of Life = Good Mental Health

BOWMAN COUNTY
Mean ~2 Poor Mental Health Days per Month

Methodology

1. Business understanding
2. Data understanding
3. Data preparation
4. Modelling
5. Evaluation
6. Recommendation

Baseline Factors for Quality of life in the US

<u>Baseline Factors</u>

- Poor Physical Health days
- Median household income
- Unemployment rate

- R-squared = 0.851

All our coefficients are significant. So we recommend taking these variables into consideration when choosing where to immigrate to, in the US.

Dep. Variable:	Poor_mental_health_days_raw_value	R-squared:	0.851
Model:	OLS	Adj. R-squared:	0.851
Method:	Least Squares	F-statistic:	5965.
Date:	Wed, 26 Feb 2020	Prob (F-statistic):	0.00
Time:	14:05:37	Log-Likelihood:	65.095
No. Observations:	3142	AIC:	-122.2
Df Residuals:	3138	BIC:	-97.98
Df Model:	3		
Covariance Type:	nonrobust		

	coef	std err	t	P>|t|	[0.025	0.975]
const	0.5142	0.048	10.820	0.000	0.421	0.607
Poor_physical_health_days_raw_value	0.8521	0.009	99.116	0.000	0.835	0.869
Median_household_income_raw_value	3.125e-06	4.15e-07	7.529	0.000	2.31e-06	3.94e-06
Unemployment_raw_value	-1.8160	0.303	-5.991	0.000	-2.410	-1.222

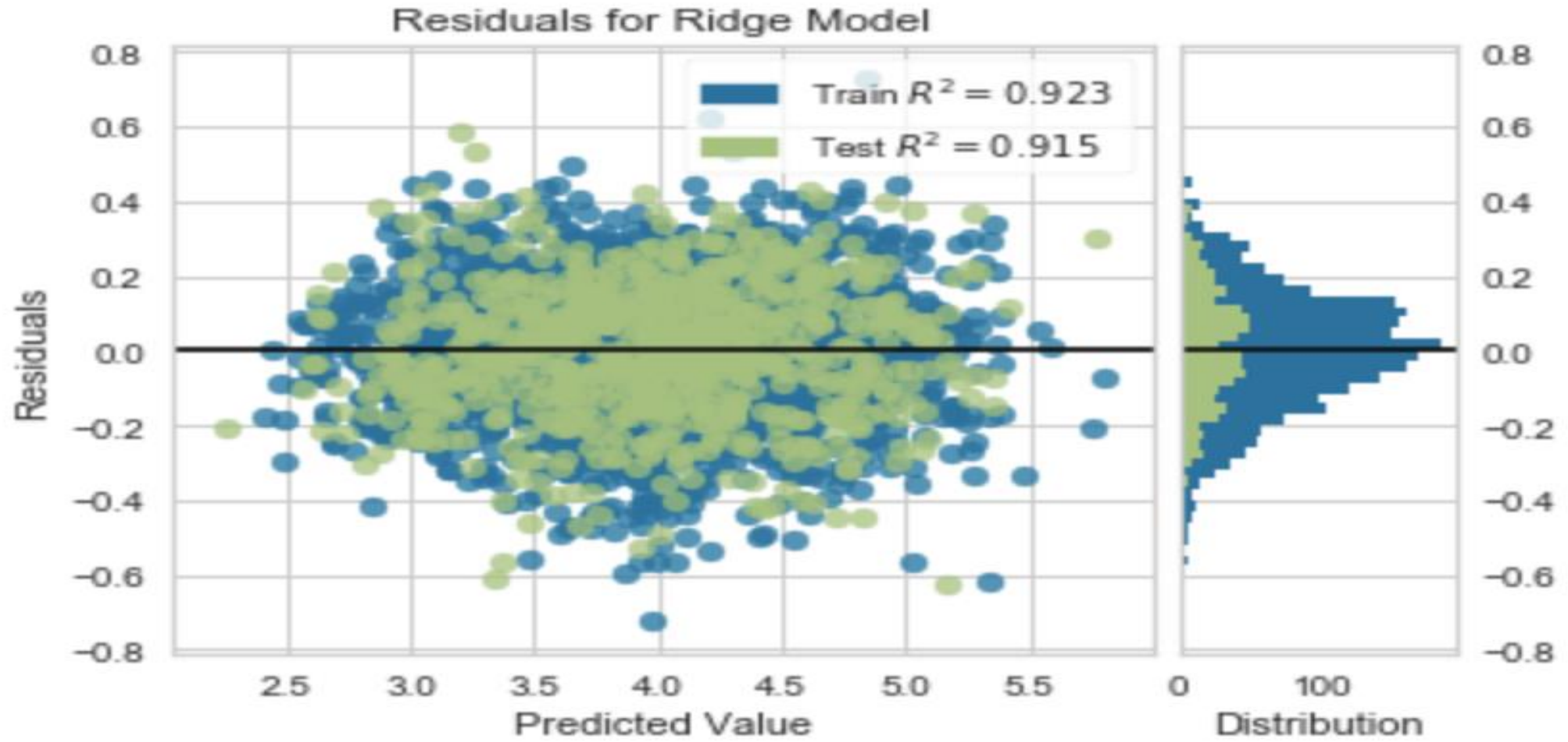| Omnibus:	5.801	Durbin-Watson:	0.819
Prob(Omnibus):	0.055	Jarque-Bera (JB):	6.723
Skew:	0.005	Prob(JB):	0.0347
Kurtosis:	3.226	Cond. No.	3.79e+06

- **Theoretically,**

We want a county with:

* Low Frequent_mental_distress
* Low Poor_physical_health_days
* Low Frequent_physical_distress
* Low Poor_or_fair_health
* Low Adult_smoking
* Sufficient_sleep
* Low Diabetes_prevalence
* Low Children_in_poverty
* High Life_expectancy
* Low Excessive_drinking
* Low Food_insecurity

* Low Premature_death
* Medium/high Median_household_income
* Low Physical_inactivity
* Low Teen_births_rate
* A good_employment_rate
* Low Drug_overdose_deaths
* Good Income_equality

Residuals for Ridge Model

Train $R^2 = 0.923$
Test $R^2 = 0.915$

Ridge Model

weights	variables
-0.344677	Insufficient_sleep_raw_value^2
-0.320856	Insufficient_sleep_raw_value Food_insecurity_r...
-0.312443	Poor_physical_health_days_raw_value Excessive_...
-0.273512	Poor_or_fair_health_raw_value Life_expectancy_...
-0.258313	Frequent_physical_distress_raw_value^2
...	...
0.266736	Poor_or_fair_health_raw_value Adult_smoking_ra...
0.340726	Insufficient_sleep_raw_value Unemployment_raw_...
0.347430	Insufficient_sleep_raw_value Excessive_drinkin...
0.417395	Poor_physical_health_days_raw_value Life_expec...
0.460157	Poor_physical_health_days_raw_value

Future work slide

- Run survey to determine endogenous driver

- Branch into new industry with strongly predictive model of Poor Mental Health Days per Month

THANK YOU
Q & A