

# Symptoms of Divorce

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Aaron Childress  
Nimu Sidhu

# Goal

Leo Tolstoy begins Anna Karenina with the famous line,

**“All happy families resemble each other;  
each unhappy family is unhappy in its own way.”**

In our analysis, we put this notion to the test by examining the extent to which there are common features that represent **Symptoms of Divorce**.

# Data

IPUMS USA supplies microdata on the American population for social, economic, and health research, aggregated from:

- 16 federal censuses
- American Community of Surveys, 2000-present
- Puerto Rican Community Surveys, 2005-present

Information is available on households or individual persons.

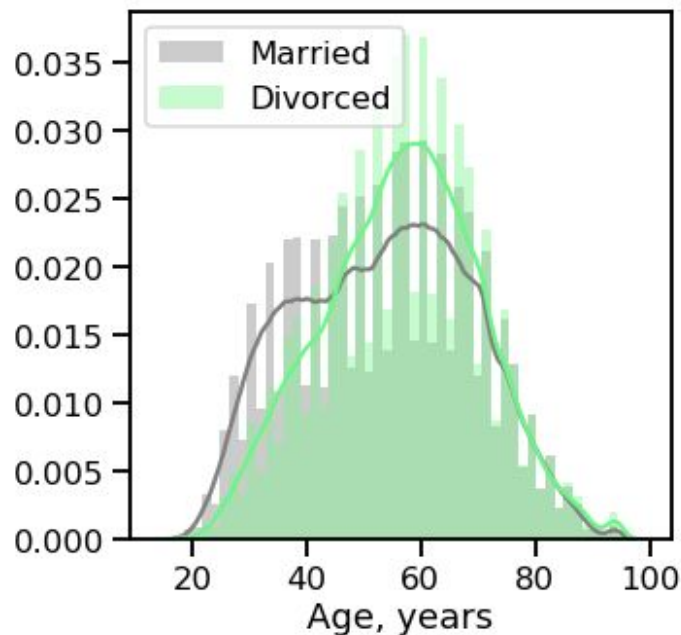
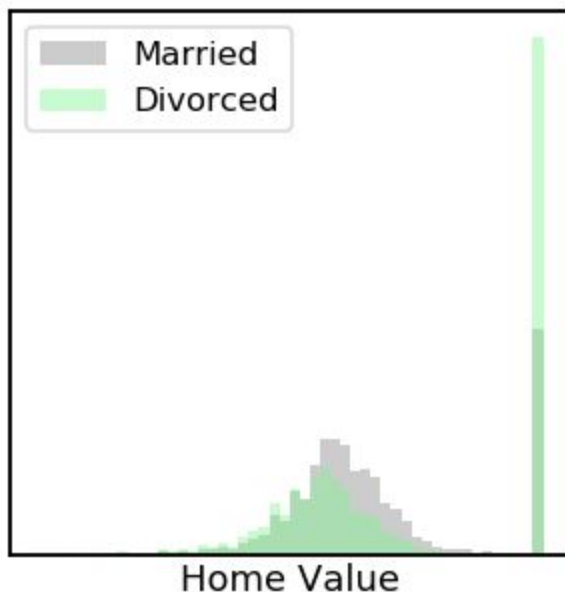
@ameasure has written a function that maps raw IPUMS extract data to variables represented.

# Available Predictor Variables



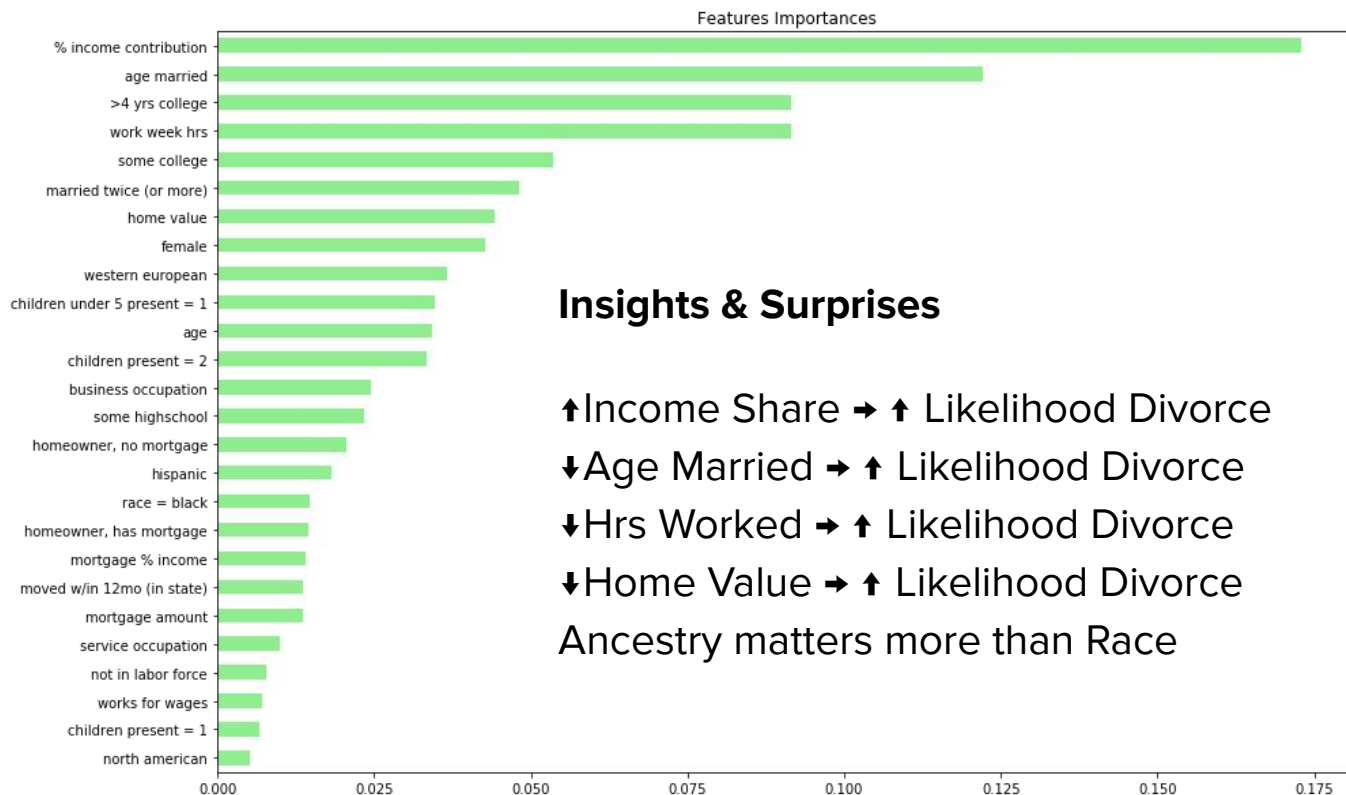
- Household Income
- Mortgage
- Number of children
- Migration from a home, state, or country - within one year
- Hours worked per week
- Education level attained
- Race
- Ancestry

# Comparing Predictor Distributions



- ❑ Low and high home values more frequent in Divorce distribution
- ❑ Older people tend to show higher Divorce rates than younger people

# Key Predictor Variables



# Results

	Predicted Divorced	Predicted Married
Actual Divorced	<b>136k</b>	<b>164k</b>
Actual Married	<b>97k</b>	<b>1.29m</b>

## So, can we predict divorce?

- Of the marriage statuses predicted divorced, we were right **58%** of the time
- There are additional features beyond the scope of the socioeconomic and cultural predictors we used that could increase explanatory power

# Conclusion and Recommendations

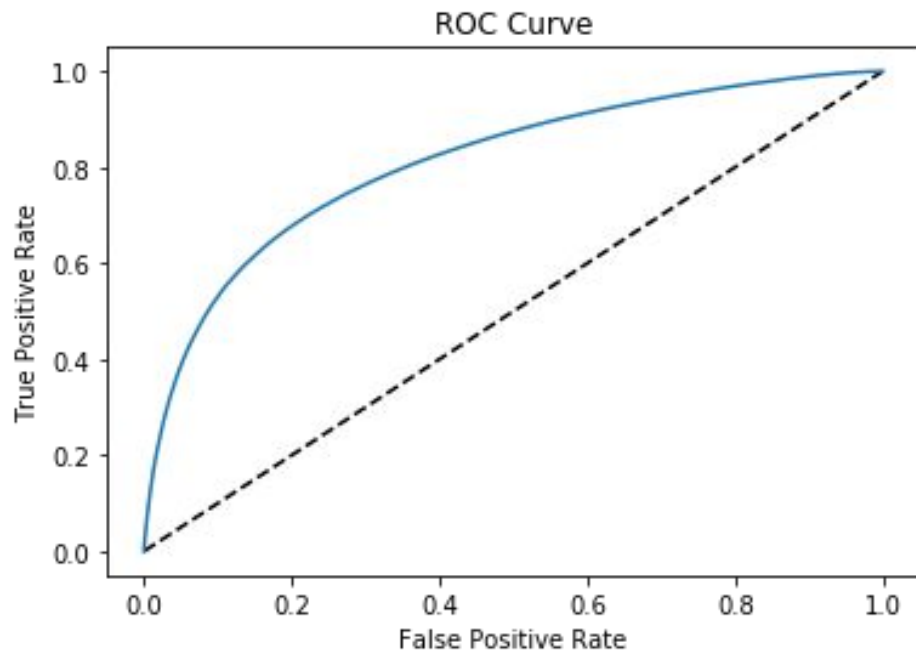
Marriage and divorce can strongly affect a person's quality of life - positively or negatively. Importantly, a **divorced individual may be equally happy as a married individual.**

Our findings indicate that **individuals with more social and economic stress are more likely to be divorced.** In these cases of divorce, support services helping address key stressors can alleviate the fall-out of divorce. These can range from **community programs** to **services offered through family law practices.**



Questions?

# Appendix: Model Performance



Model	Accuracy Score
Random Forest	0.850
Logistic Regression	0.694
Gradient Boosted Trees	0.848
Overall	0.846