**How does your lifestyle affect your sleep?**

# Abstract

Our team was interested in discovering what lifestyle choices are correlated to sleep disorders. Leveraging available CDC data from 2013-2014, we were able to build a model that is a non-scientific predictor of a user’s potential to be diagnosed with a sleep disorder given certain health and lifestyle selections.

# Approach

We approached the dataset with one goal in mind: determine which of the chosen factors we selected correlated to a patient’s diagnosis of an unspecified sleep disorder.

Within those seven (7) files, there were 3,588 distinct measures. Once the team determined the prediction tool would be based on lifestyle factors only, the measures were cut down to 47 key indicators across six (6) categories:

* Demographics
* Diet & Exercise
* Drug and Alcohol Use
* Financial Status
* Sleep Habits
* Social-Emotional

Subsequently, those 47 key factors were used to find the appropriate subset that created a statistically viable model.

# Background

The project employed a comprehensive health dataset from the CDC, made up of seven (7) separate sections detailing information from demographics to financial status to health and wellness statistics.

# Building the Model

Blah blah blah. Yadda yadda yadda. Fun info about our cool project. We’re awesome. Go us!

# Analysis and Results

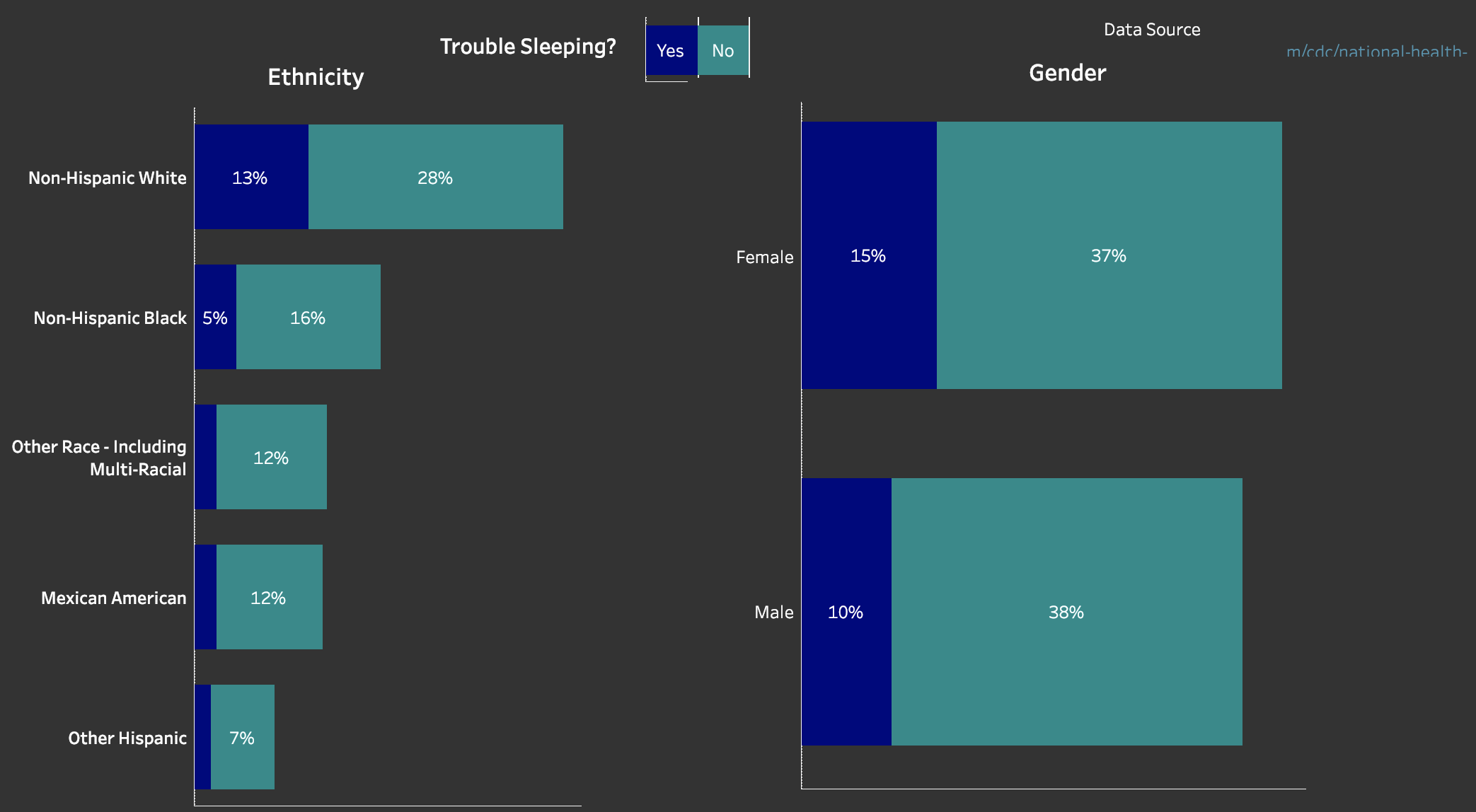
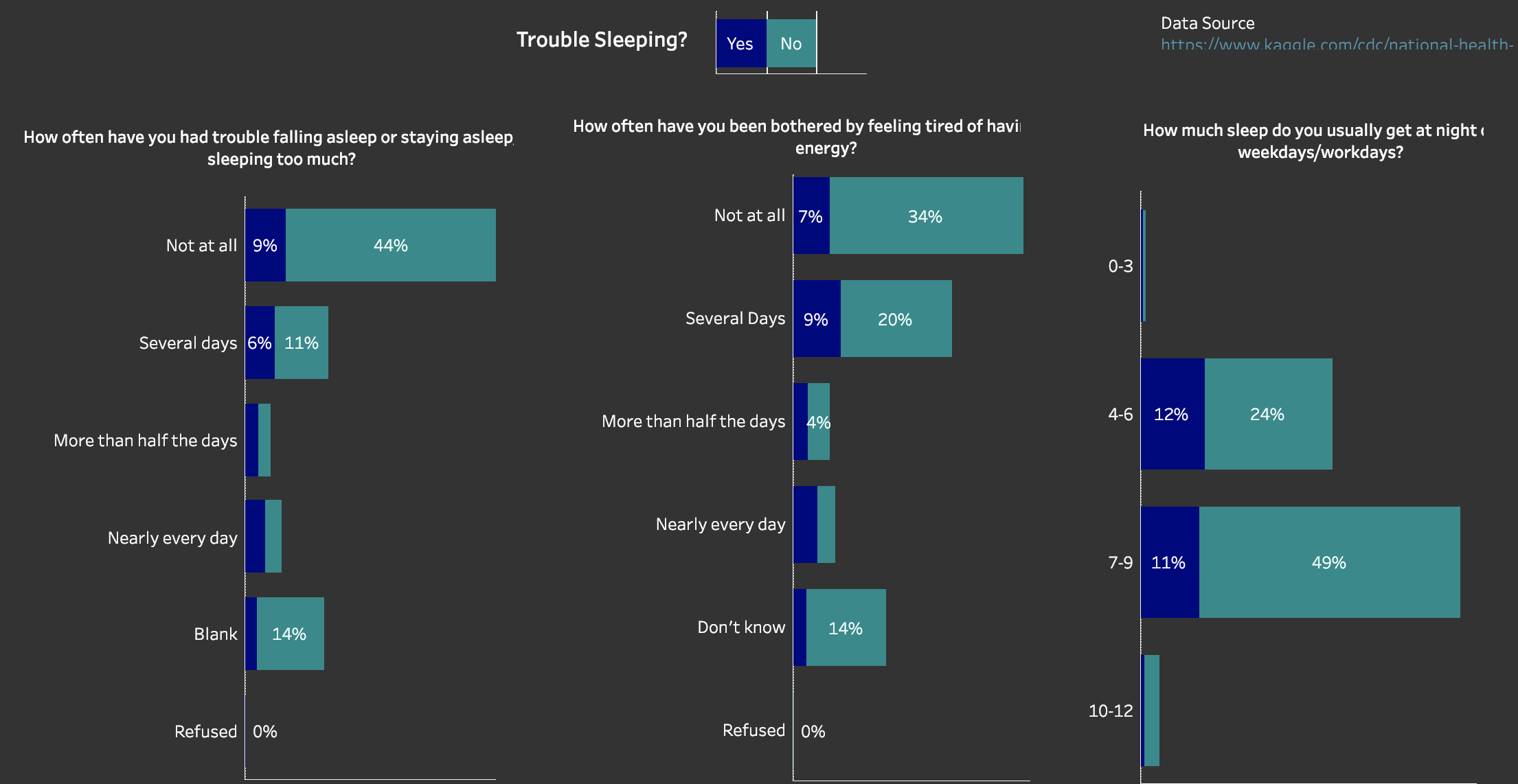
Using our model, we determined 15 critical factors used to determine a user’s propensity to be diagnosed with a sleep disorder. These 15 factors come from the areas of demographics, financial status, sleep habits, and social-emotional information.

As a result, a user can complete the questionnaire and receive a diagnosis prediction with a 77% accuracy rate.

One additional feature of the model that is worth mentioning: it is scalable and could be easily modified for any other set of variables from the large dataset.

# Data Visualization

Examples of the data analysis using demographic data (top left) and sleep habits data (bottom right).



# Architecture Diagram