

1 Results

Once we figured out which variable selection methods we wanted to use and how we wanted to use them, we were then able to implement them using a Shiny R App. A screenshot of the Shiny R app below shows exactly the options that a user has when running the web application:

Generate Relevant Variables

Variable Selection Method

☒ Lasso

☐ BIC

☐ P-Value

Select Graduation Rate of Interest

☐ Overall Graduation Rate

☐ Graduation Rates of White People

☐ Graduation Rates of Black People

☐ Graduation Rates of Hispanic People

☐ Graduation Rates of Asian People

☐ Graduation Rates of Native Americans

☐ Graduation Rates of Pacific Islanders

Number of Variables

The Shiny R App will then output the specified number of relevant variables for the specified graduation rate. For instance, lets say we were interested in finding the 5 most relevant explanatory variables for the overall graduation rate. Then, we could get 3 sets of 5 explanatory variables (one set for each variable selection method). It turns out that the only explanatory variable that appears in all 3 variable selection methods is the SAT average variable, which has a strong positive effect on graduation rates. This makes sense because intuitively, SAT scores have a strong correlation with high academic performance, which is

essential to graduating.