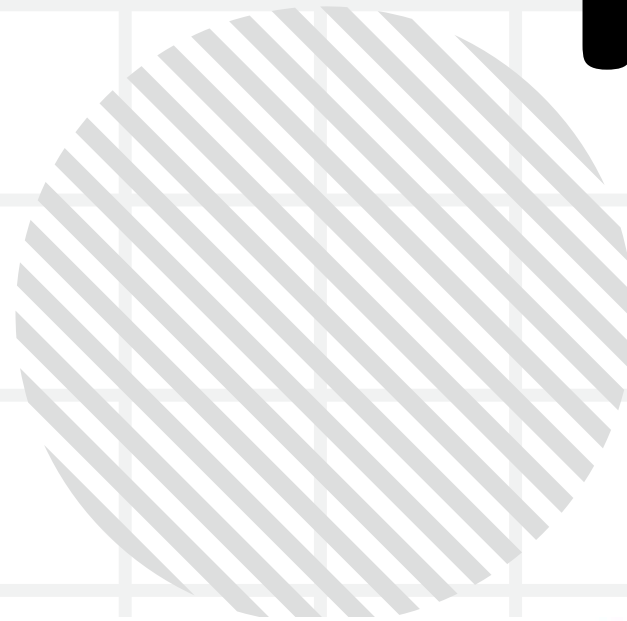


H1N1 VACCINE PREDICTIONS





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Flatiron Schools
06/22//2023

WHAT IS H1N1

What is swine flu (H1N1)?

The H1N1 flu, sometimes called swine flu, is a type of influenza A virus. During the 2009-10 flu season, a new H1N1 virus began causing illness in humans. It was often called swine flu and was a new combination of influenza viruses that infect pigs, birds, and humans.

The World Health Organization (WHO) declared the H1N1 flu to be a pandemic in 2009. That year the virus caused an estimated 284,400 deaths worldwide. In August 2010, WHO declared the pandemic over. But the H1N1 flu strain from the pandemic became one of the strains that cause seasonal flu.

PROBLEM



What features are the most important when determining vaccine participation?

DATA

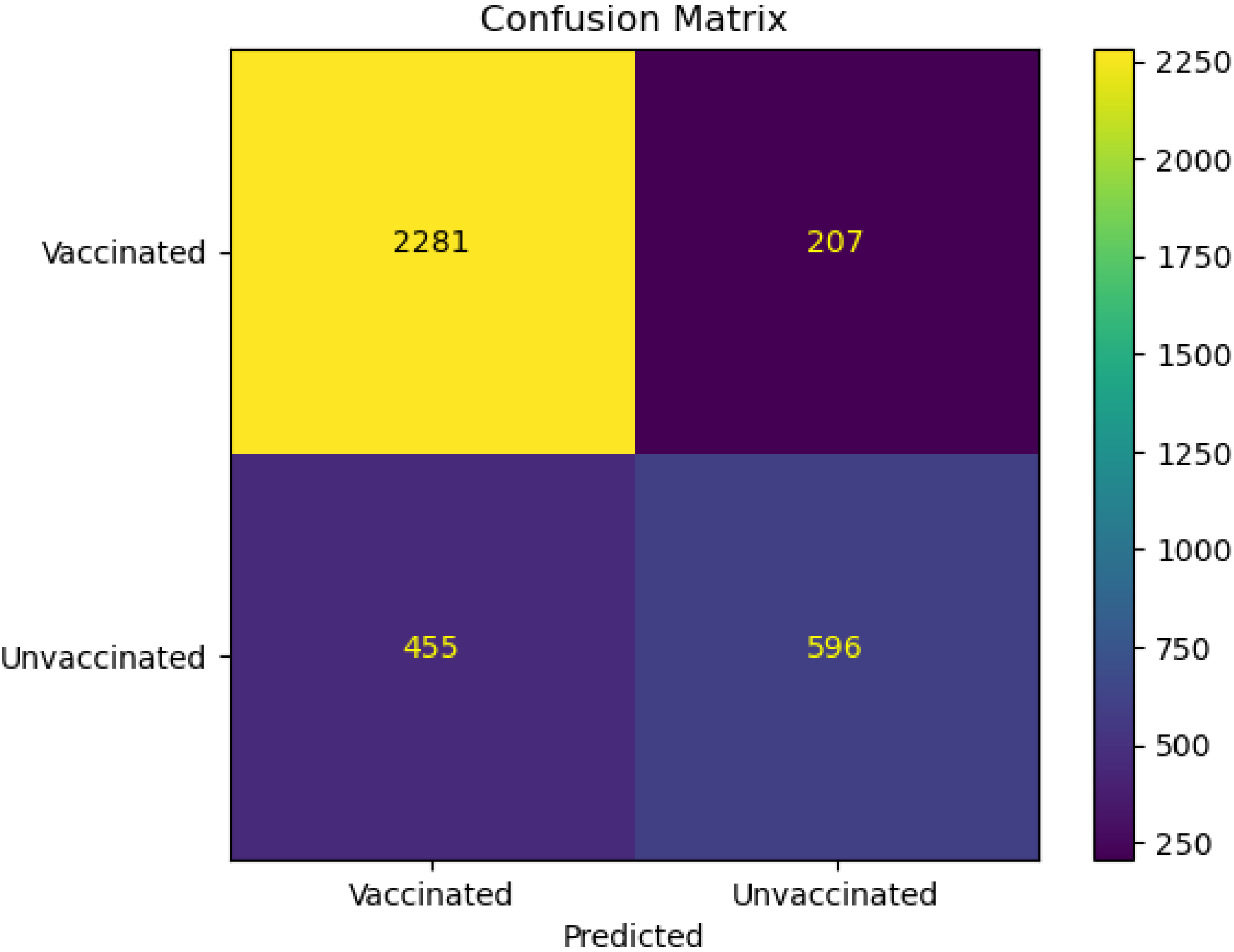
DATA SOURCE

National 2009 H1N1 Flu Survey (NHFS).

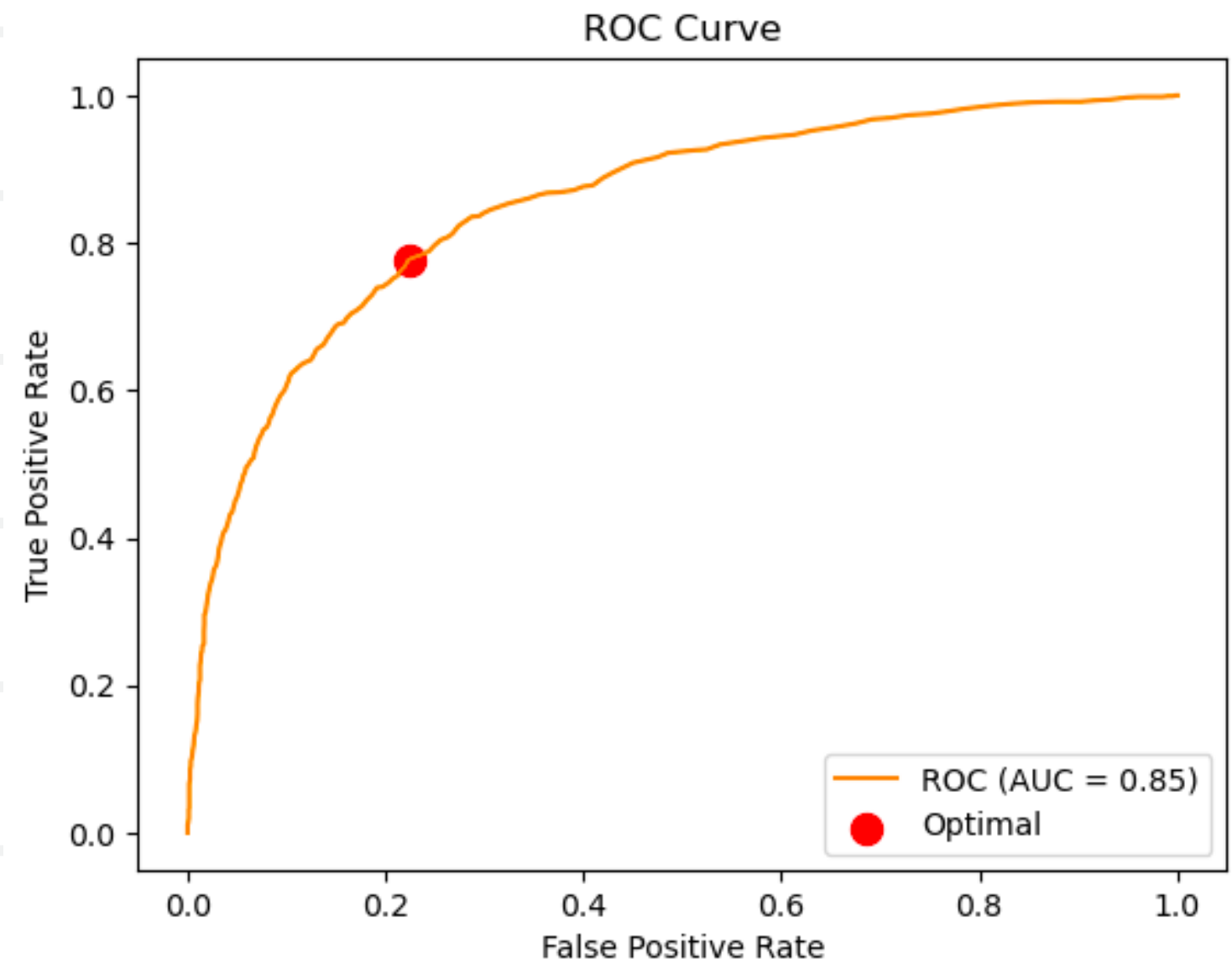
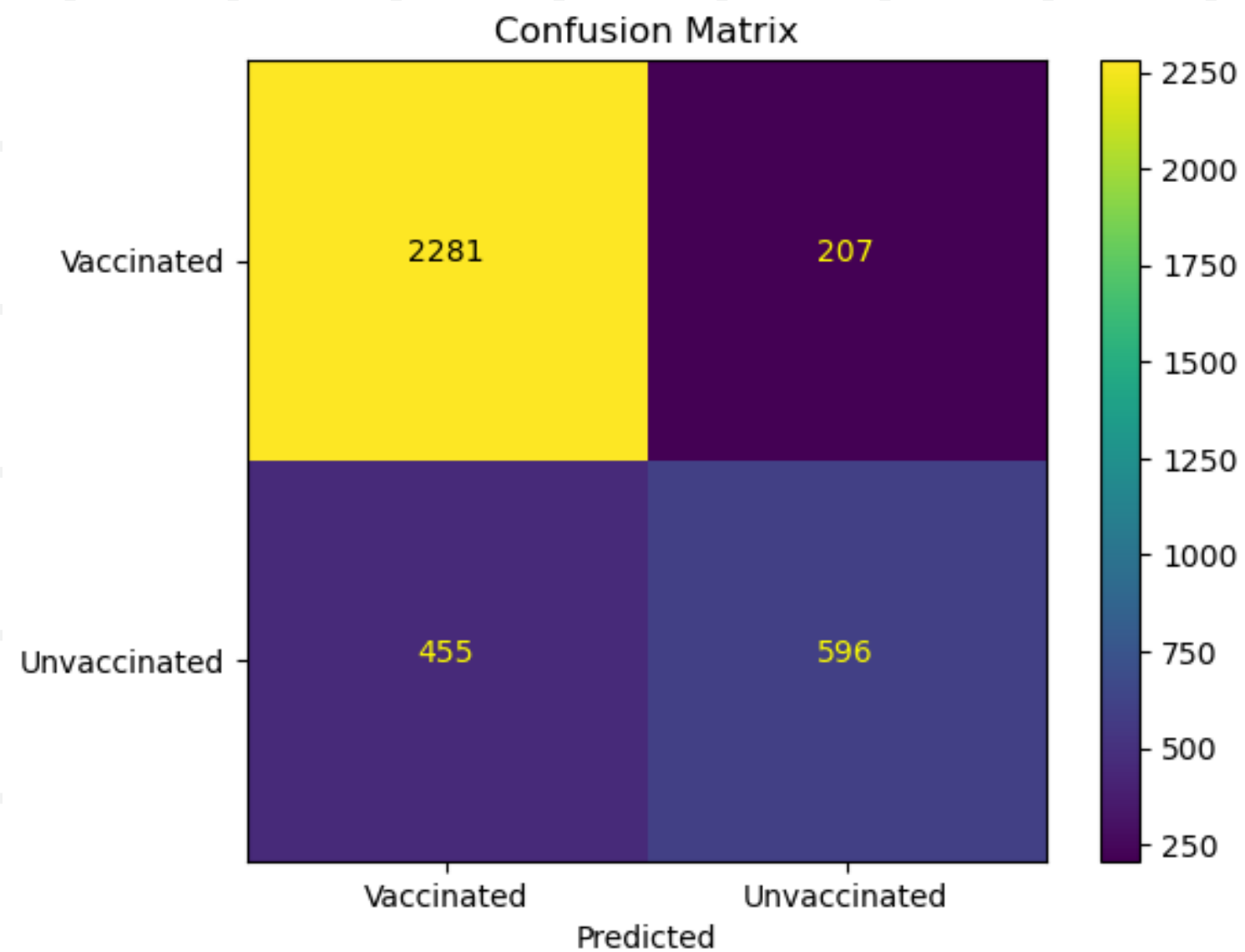
WHO WAS POLLED?

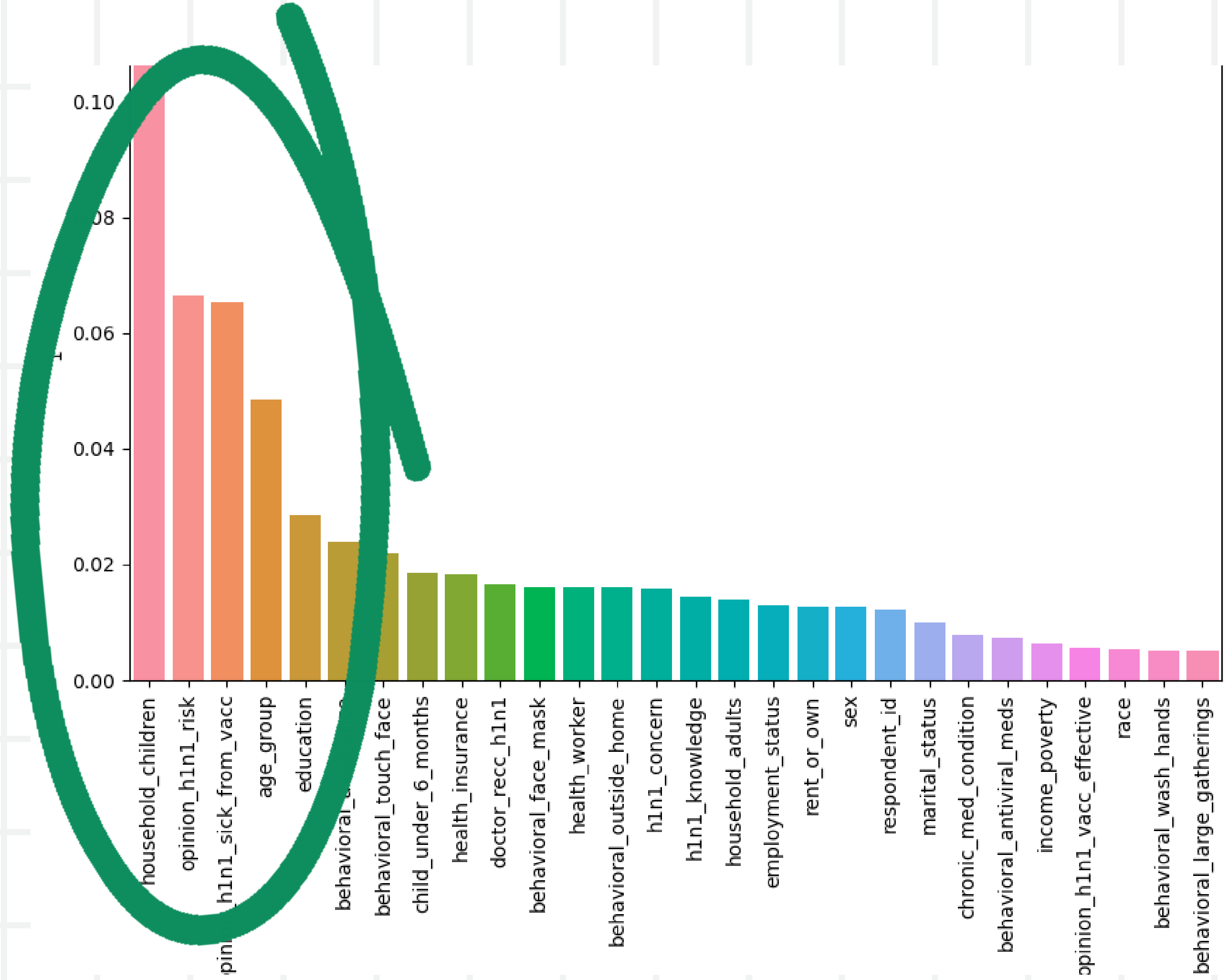
- The NHFS was conducted between October 2009 and June 2010.
- The target population for the NHFS was all persons 6 months or older living in the United States

Recall	$\frac{(\text{Vaccinated} + \text{Unvaccinated}(\text{vaccinated}))}{\text{Vaccinated}}$	81%
Accuracy	$\frac{(\text{Vaccinated} + \text{Unvaccinated})}{(\text{Vaccinated} + \text{unvaccinated} + \text{Vaccinated}(\text{unvaccinated}) + \text{Unvaccinated}(\text{vaccinated}))}$	74%



CHECKING MODEL PERFORMANCE





**MOST IMPORTANT
FEATURES**

**NUMBER OF
CHILDREN**

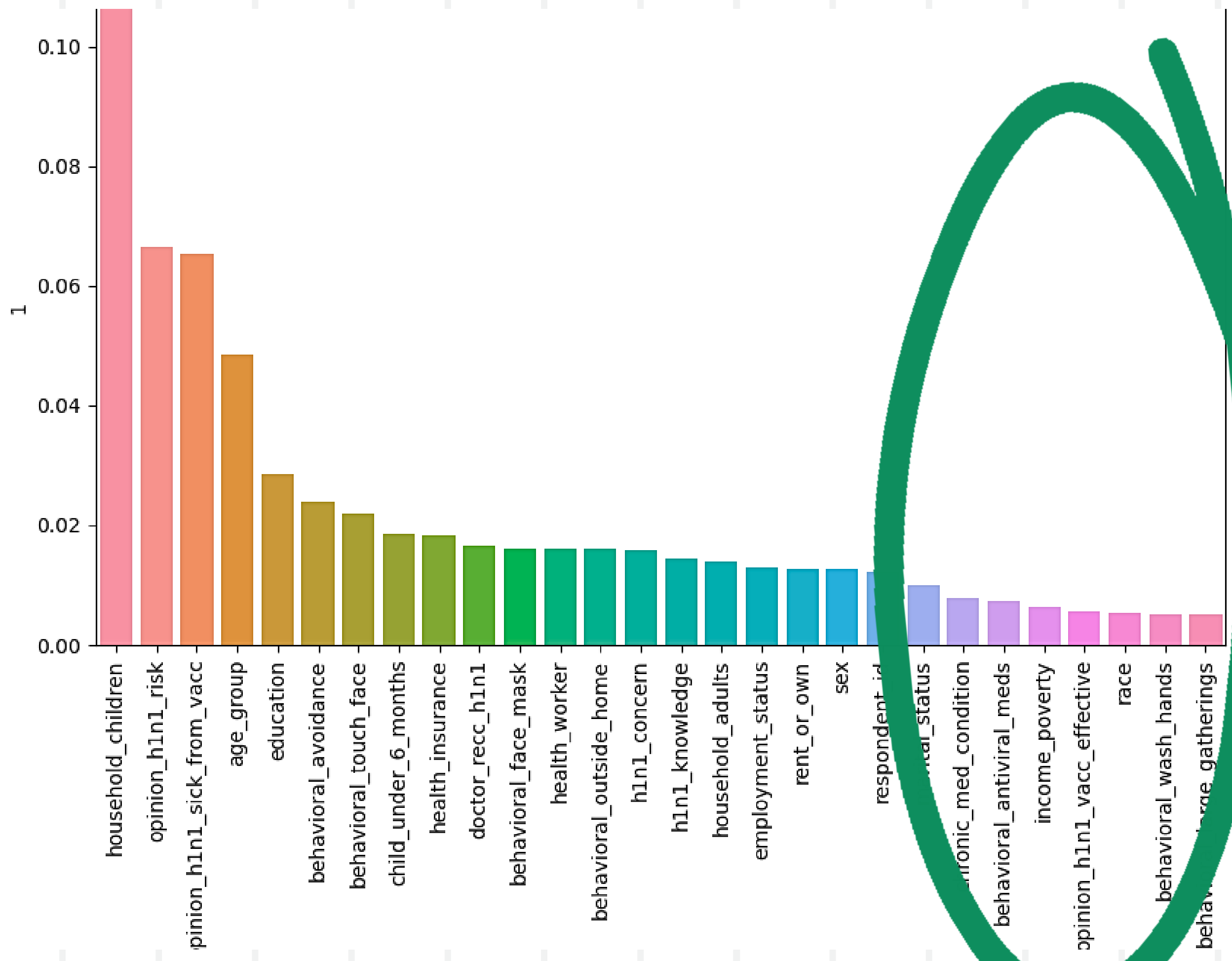
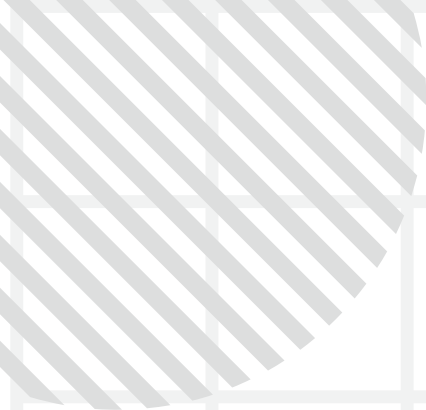
0.107203

AGE

0.048549

EDUCATION

0.028444



LEAST IMPORTANT FEATURES

SEX

0.012692

INCOME

0.006319

RACE

0.005279



RECOMMENDATIONS

⚙️ RECOMMENDATION 1

The most important factors to increase participation in the H1N1 vaccine are; Number of children, the age of the patient, and the level of education they have.

⚙️ RECOMMENDATION 2

Avoid using Race, Sex, and Income to target prospective patients.



THANK YOU

Any Questions?

