# PREDICTING VACCINATION RATES

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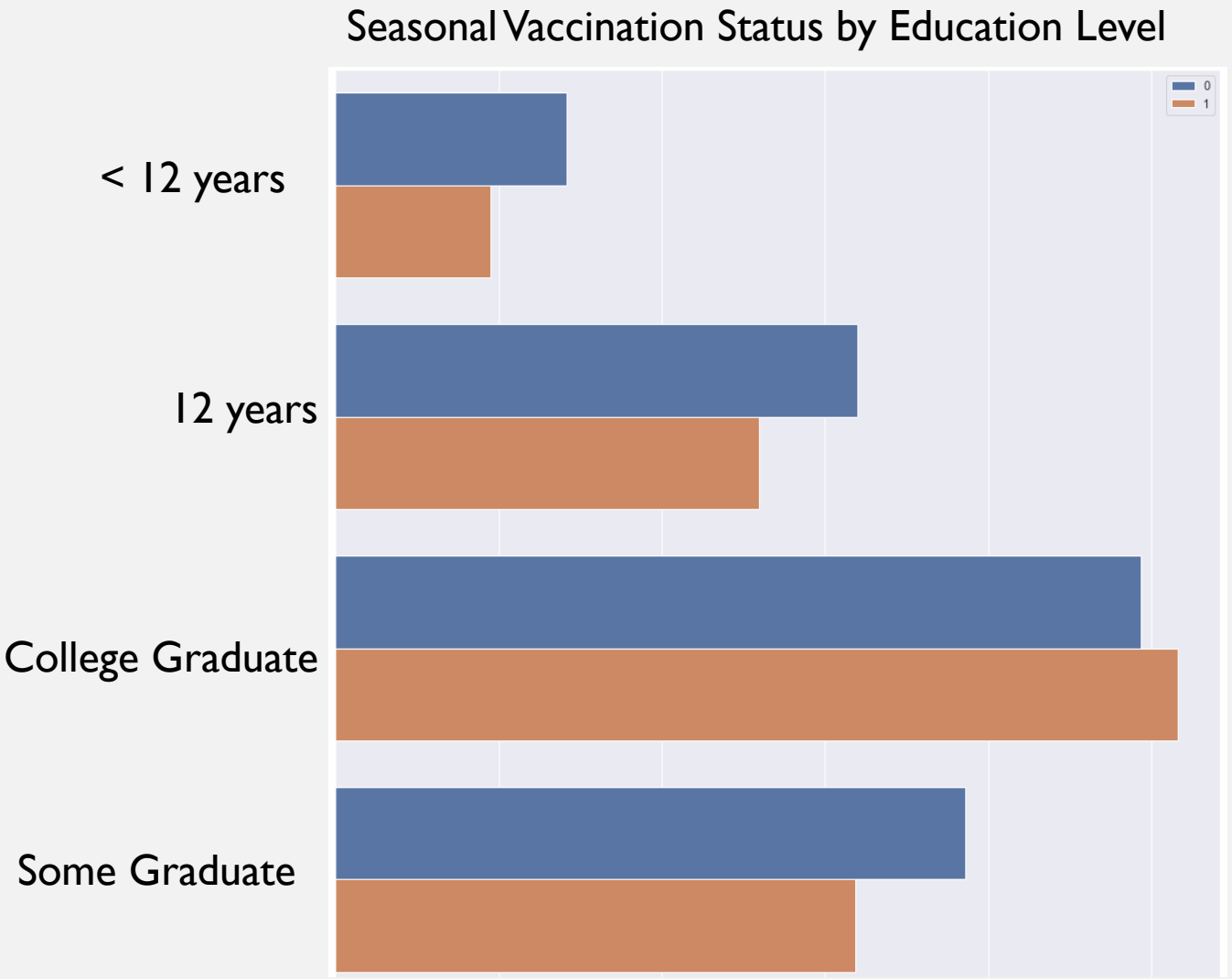
# BUSINESS OBJECTIVES

- As the world recovers from Covid-19, it's important to determine an effective vaccination strategy to prepare for the next pandemic.
- With limited resources it's important to have an efficient strategy to vaccinate those who need it.
- We analyzed a dataset containing information on the seasonal flu to predict whether a patient should get a vaccination.
- We created a model aimed to reduce the number of false negatives, finding

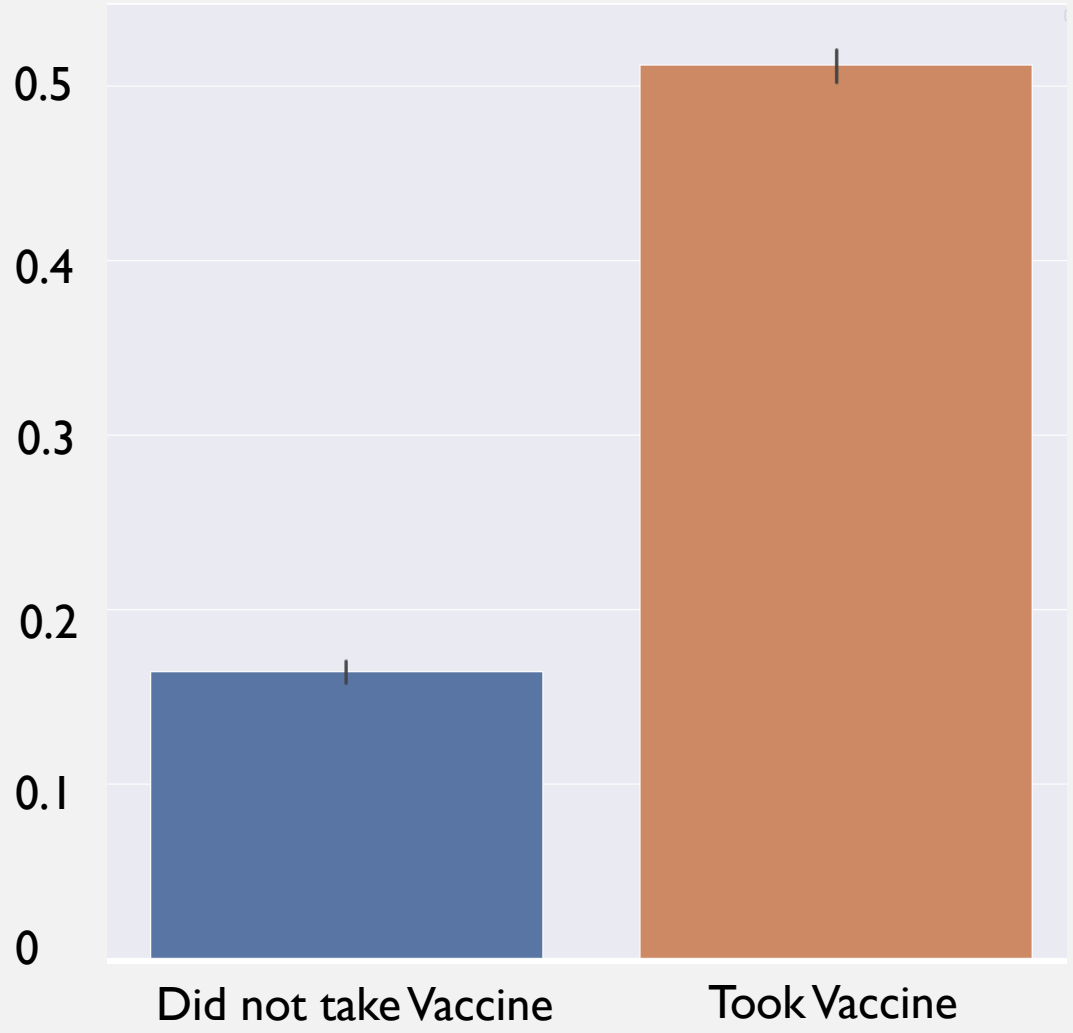
# DATASET

- The data set contains data on the H1N1 pandemic of 2009 and the seasonal flu.
- In this study, we will only be focused on the features and predicting vaccination for the seasonal flu.
- The training data for the model contains around 26 thousands records and 35 data features.
- Key features include: age, race, educational level, doctors recommendation.

# DATA EXPLORATION - EDUCATION

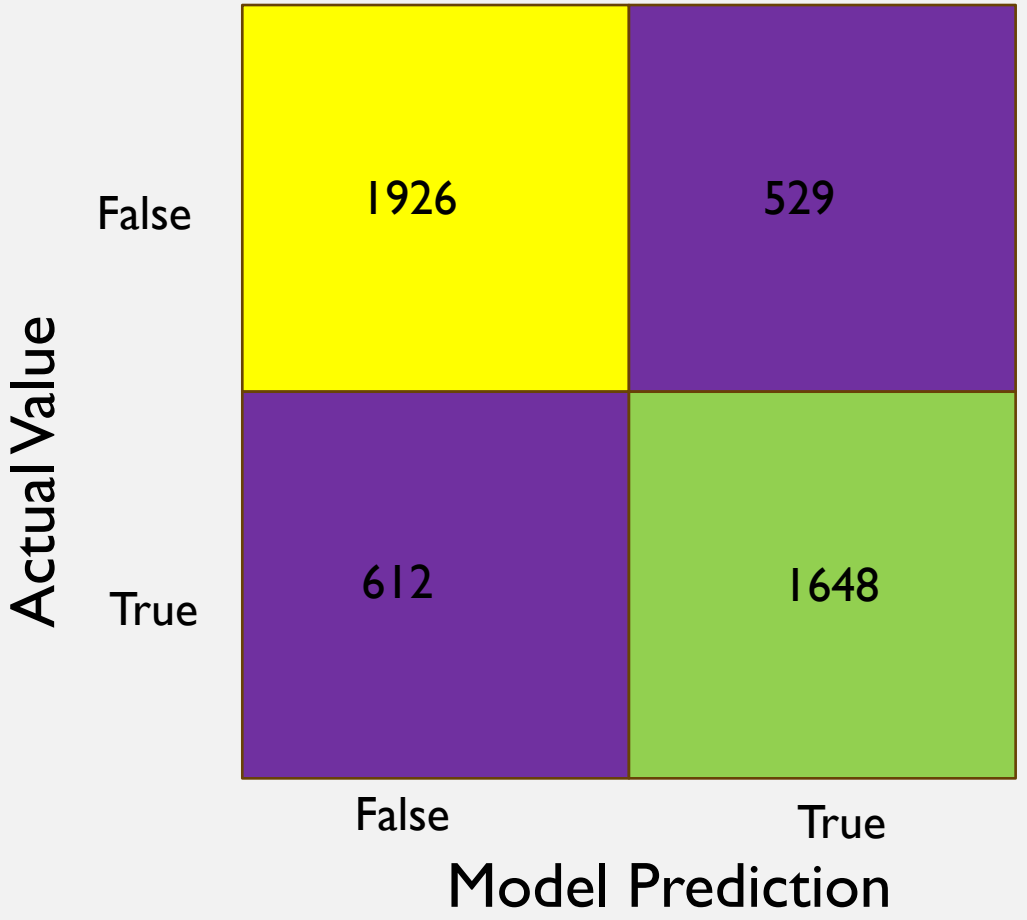


# DATA EXPLORATION – DOCTORS RECOMMENDATION



# MODEL RESULTS

- The final model was selected on reducing False negatives
- It had an accuracy of 76%.
- Recall of 76%



# RECOMMENDATIONS

- Focus on ensuring that doctor's give vaccine recommendations.
- Target groups with less education for vaccine outreach.
- Optimize on identifying patients who need the vaccine.

# FUTURE PROJECTS

- Apply different models to different populations. Reduce false negatives in vurnerable populations, but reduce false positives in healthier ones.