

Vaccines and Helping the Community

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Overview

Business Problem

Data Understanding

Data Preparation

Model and Findings

Conclusion

Business Problem

We have been employed by a community outreach program that wants to know who is and who is not getting vaccinated within their community





Data Understanding

- National 2009 H1N1 Flu Survey (NHFS)
- Sponsored by CDC
- Originally used to produce estimates of vaccination coverage rates

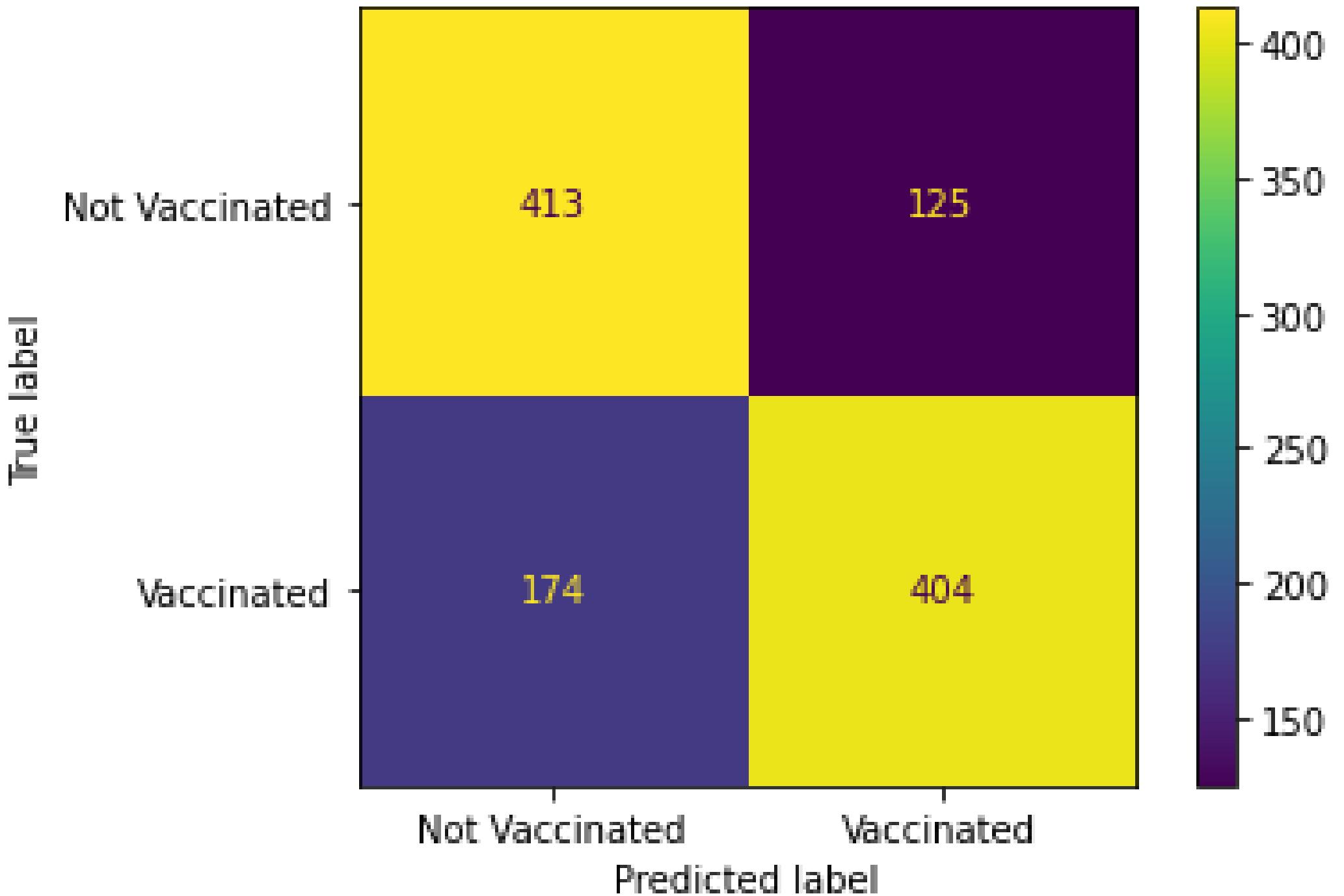
Data Preparation:

- Originally had 36 columns and 26,000 rows
- Examined seasonal flu and objective data
- Data was very balanced



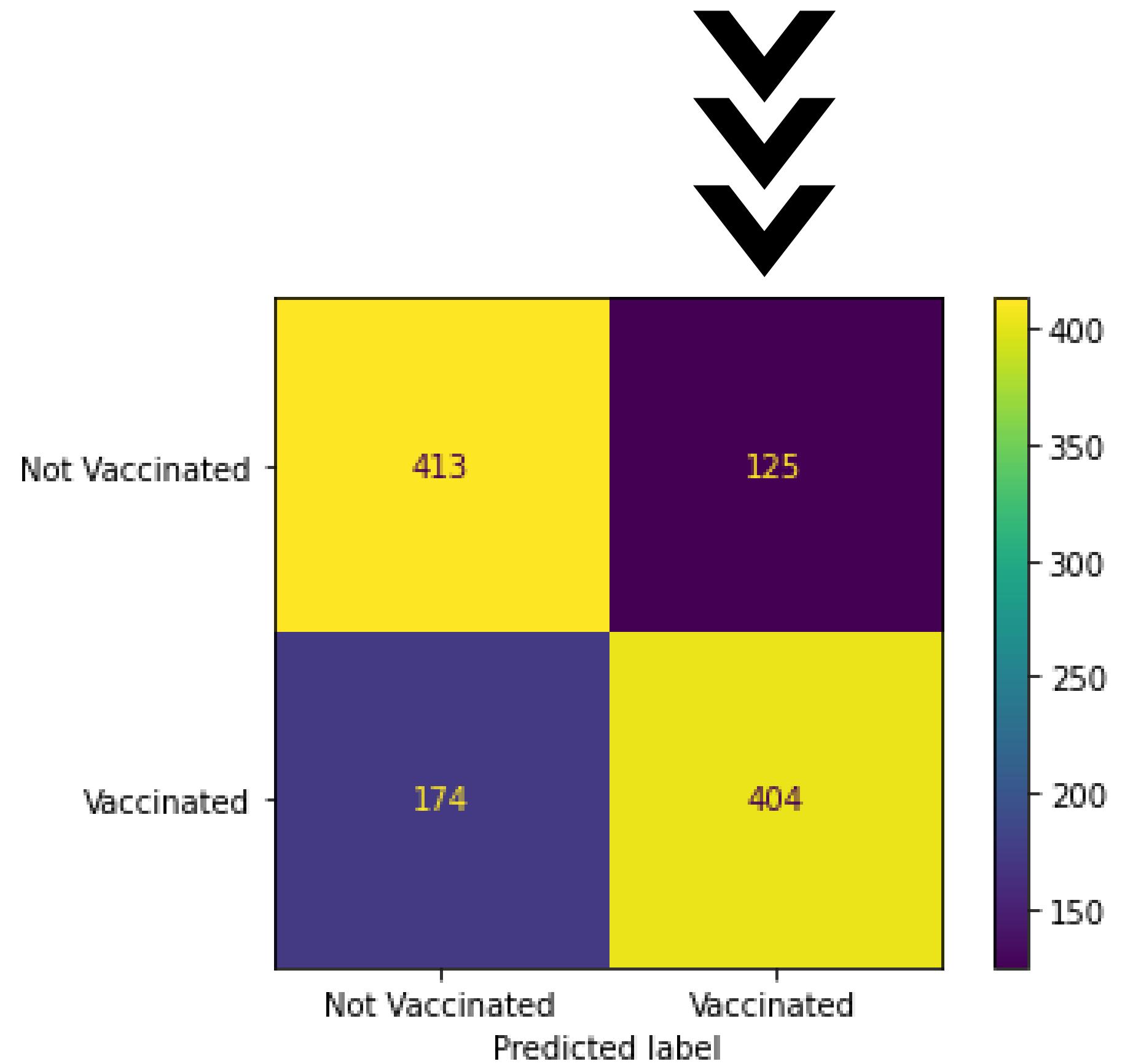
Final Model

- 73% accurate
- False Positive: 16%
- False Negative: 11%



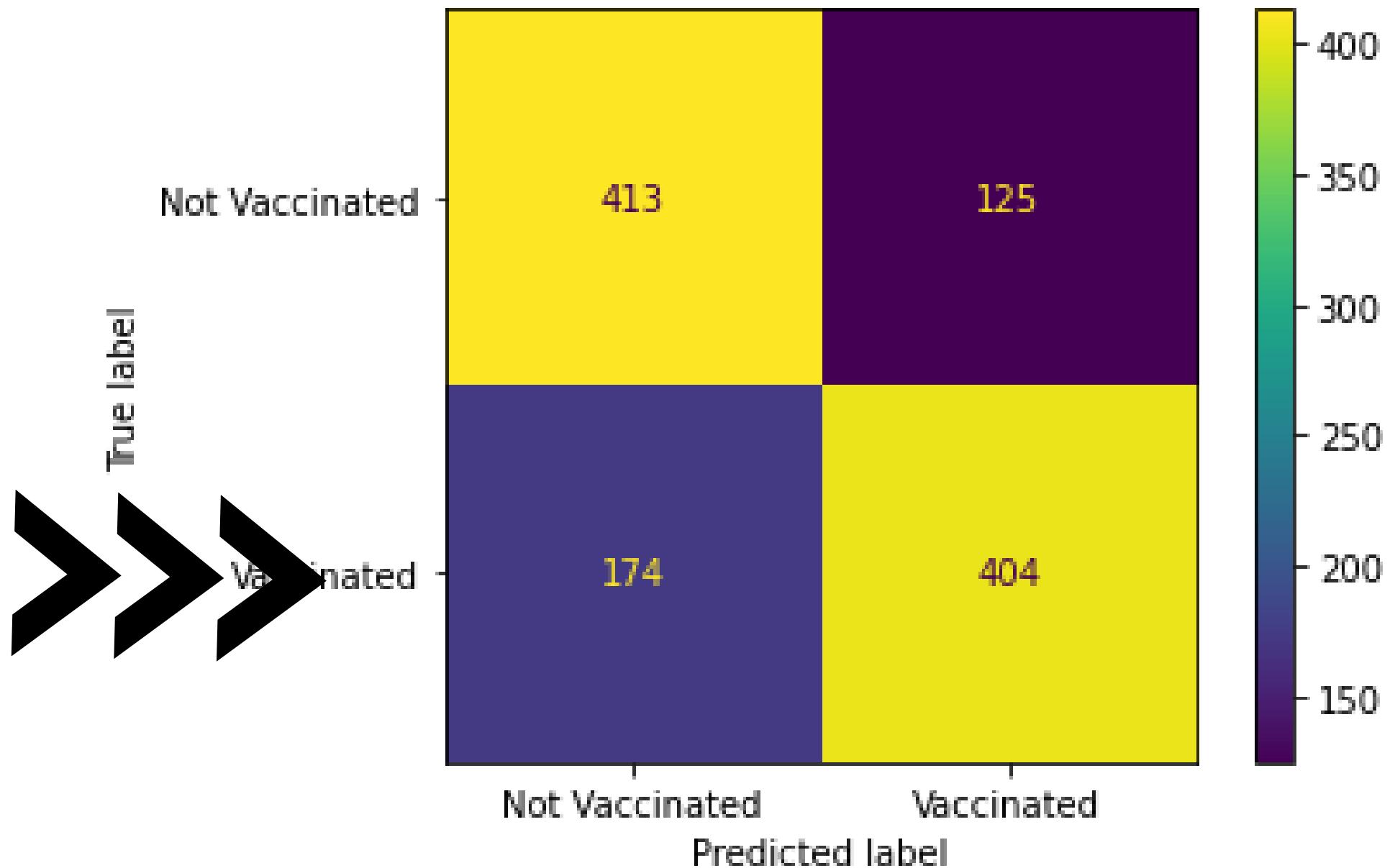
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Important Features

- We found that older adults are more likely to receive flu shots
- More educated are more likely to get a flu shot
- People with less disposable income less likely to get a flu shot

Conclusion

- Focus on advertising/ encouraging middle aged people
- Make shots more available in lower income areas



If We Had More Time:

- Find a way to reduce false positives
- Experiment with different feature combinations
- Find a convinceable target

Thank you!