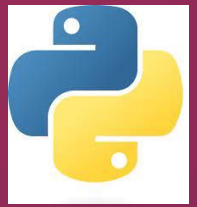
# ReAdMIT-D -

## A Data-driven Approach to Predicting Hospital Readmission in Diabetes

Presented By : Alison Park

# About Me



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# Business Problem

Hospital readmission for diabetic patients

1. Impact on Patient Health
2. Healthcare Resource Utilization
3. Need for Comprehensive Solutions

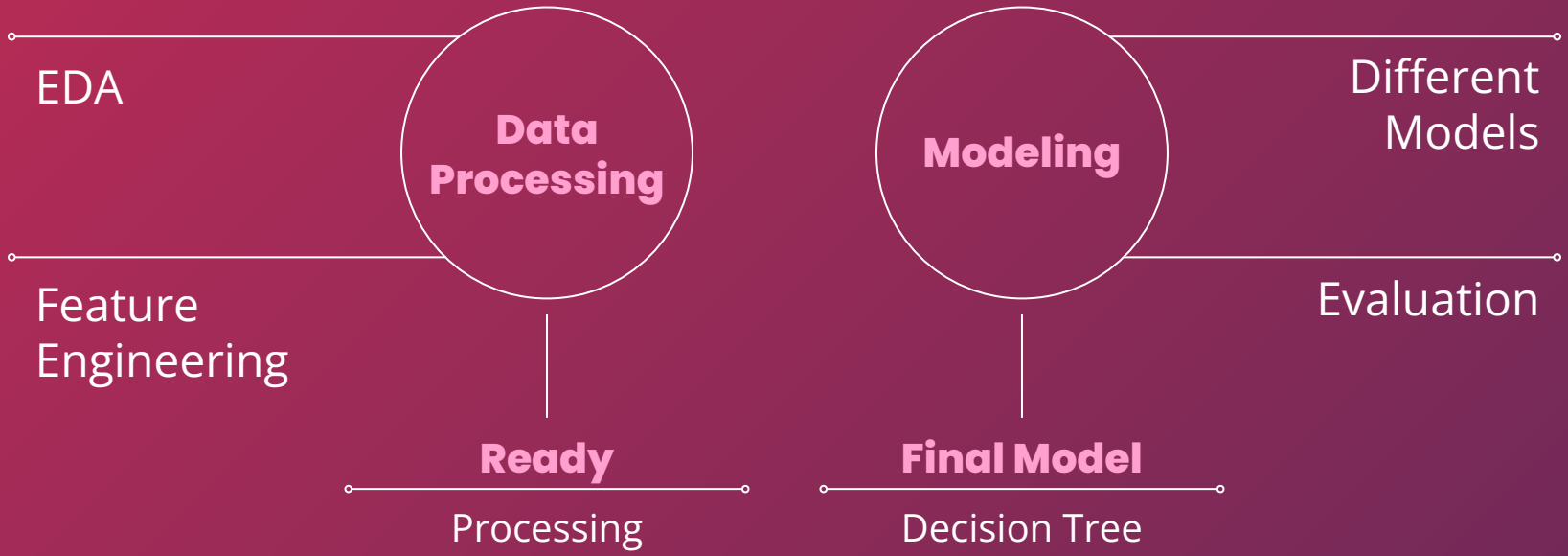
# Data

- 10 years (1999-2008) of clinical care at 130 US hospitals and integrated delivery networks

- (101766, 50)


- Strack B, DeShazo JP, Gennings C, Olmo JL, Ventura S, Cios KJ, Clore JN. Impact of HbA1c measurement on hospital readmission rates: analysis of 70,000 clinical database patient records. Biomed Res Int. 2014;2014:781670. doi: 10.1155/2014/781670. Epub 2014 Apr 3. PMID: 24804245; PMCID: PMC3996476.

# Methods

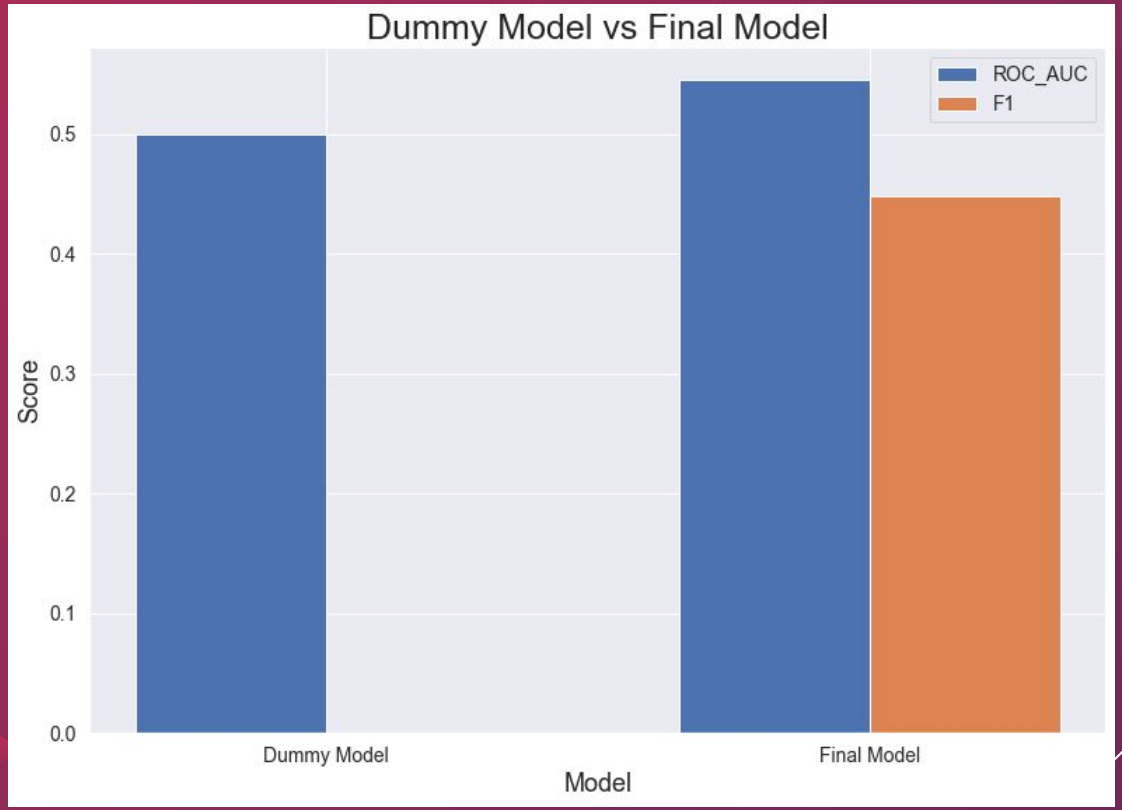

EDA
Feature Engineering
Data Processing
Ready
Processing
Modeling
Final Model
Decision Tree
Different Models
Evaluation

# Model

## F1

Dummy Model:
0.0000

Final Model:
0.4479



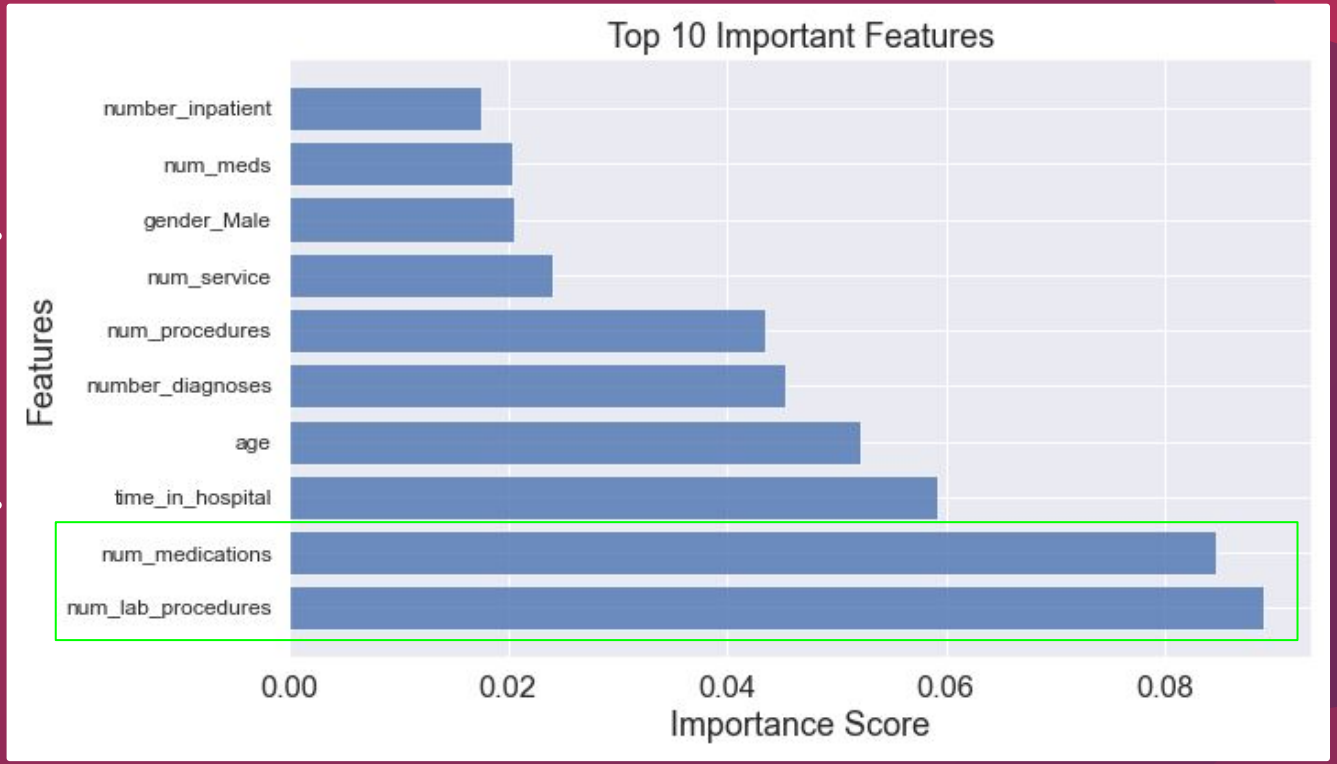
# Top features

## Number Procedures

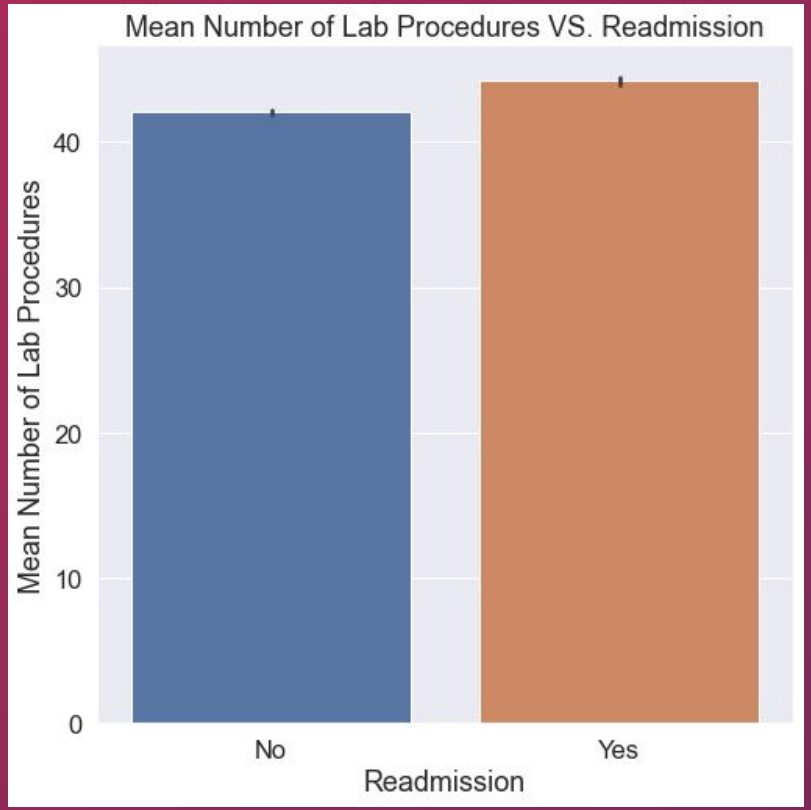
0.0890

## Number of Medications

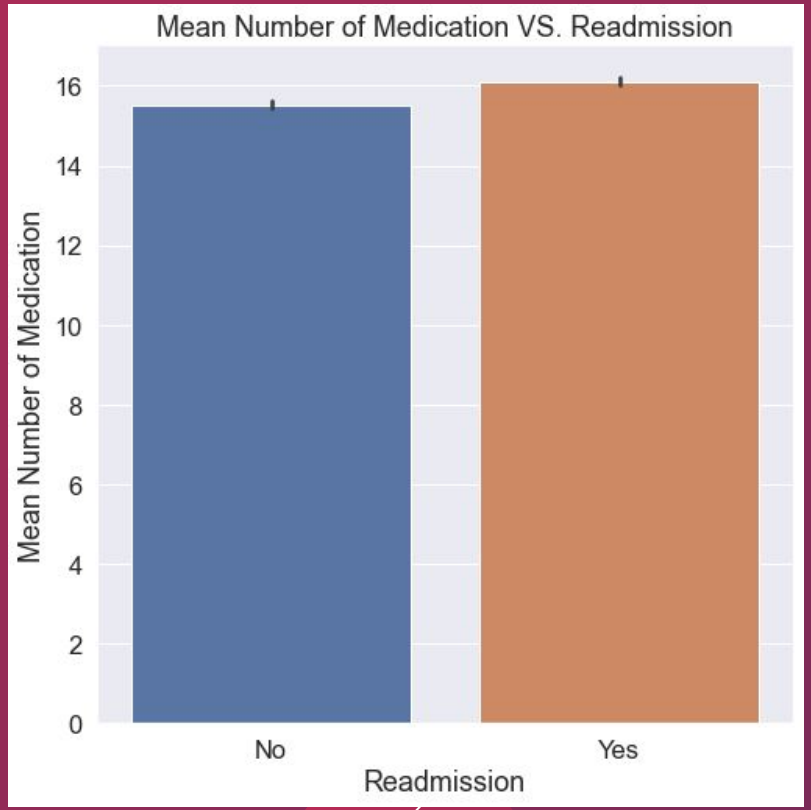
0.0848



# Lab Procedures



# Number of Medications



# Conclusions

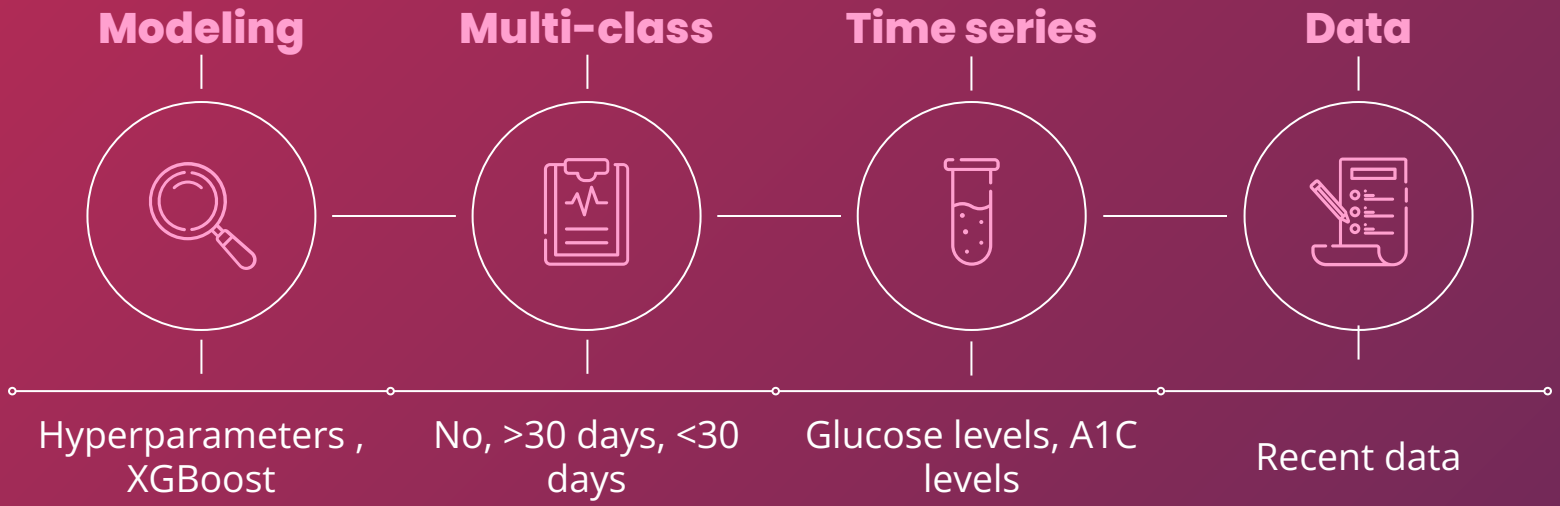
01 F1

02 Lab Procedures

03 Number of Medication

04 Application

# Future Investigations



# THANKS

Do you have any questions?

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https://github.com/alisonpark3/Diabetic-Hospital-Readmission

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