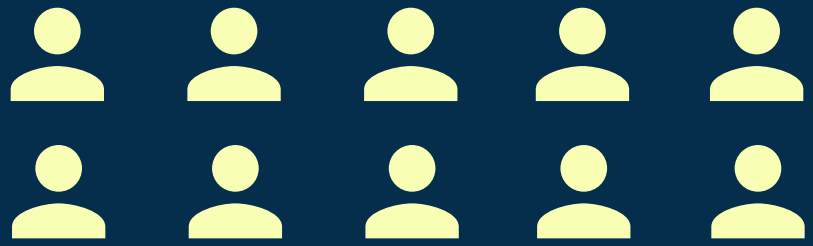
WILL YOU COME BACK TO THE DOCTOR?

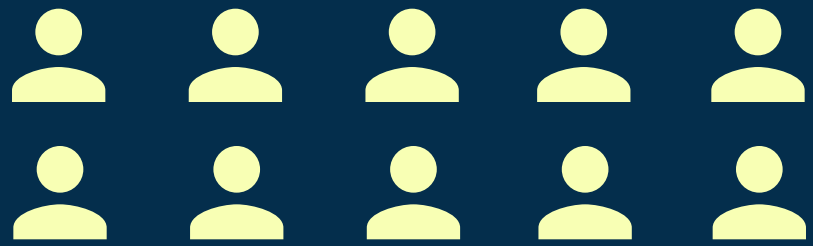
WHY HOSPITAL READMISSION MATTER

Filipa Lopes | 11th October 2019



$41 BILLION

In 2011, american hospitals spent over $41 billion on diabetic patients who got readmitted within 30 days of discharge



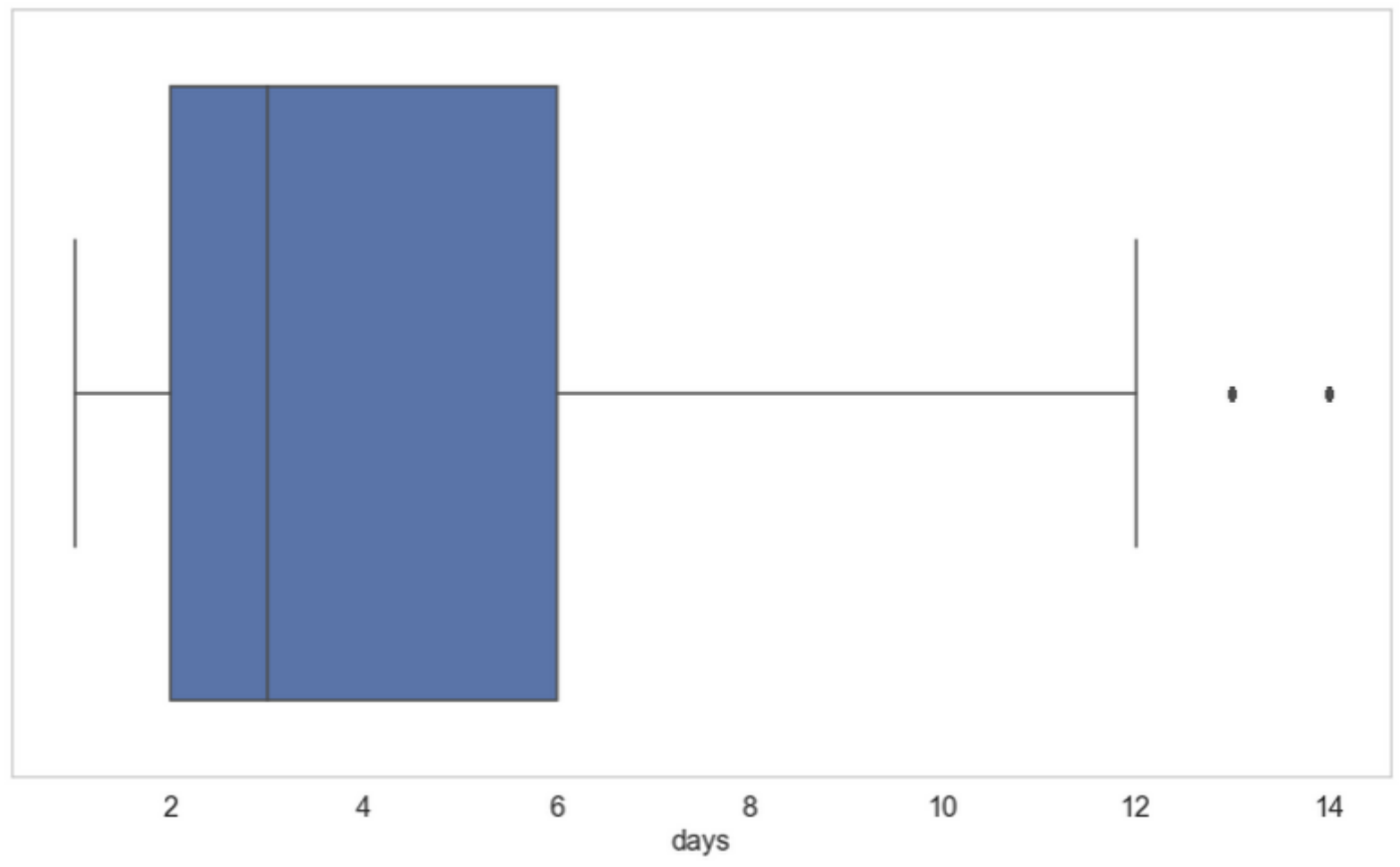
What factors are the strongest predictors of hospital readmission?

How well can we predict hospital readmission?

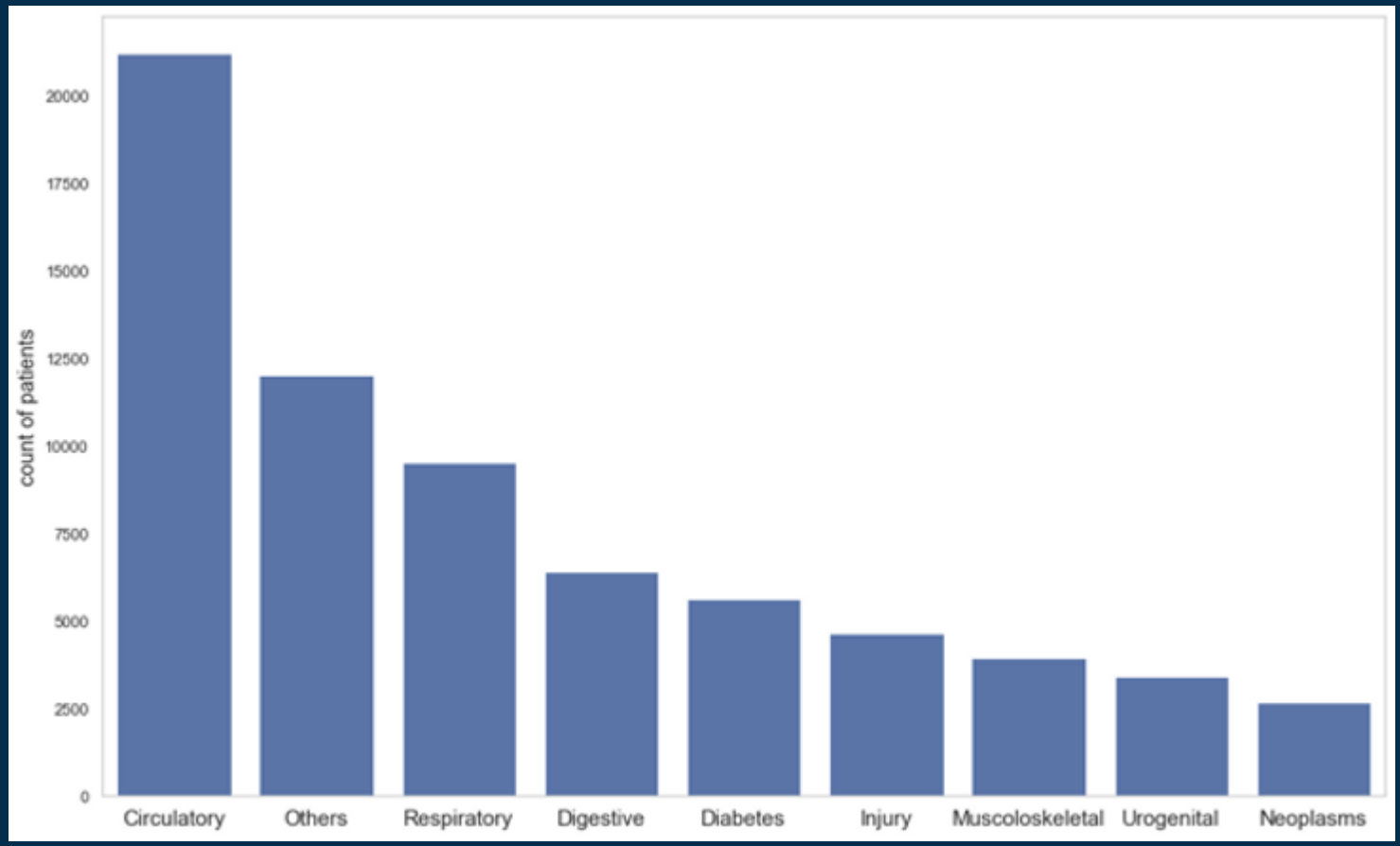
FINDING THE DATA

- source: UCI Machine Learning Repository.
- 130 US hospitals, 1999-2008.
- ~70.000 diabetic patients.

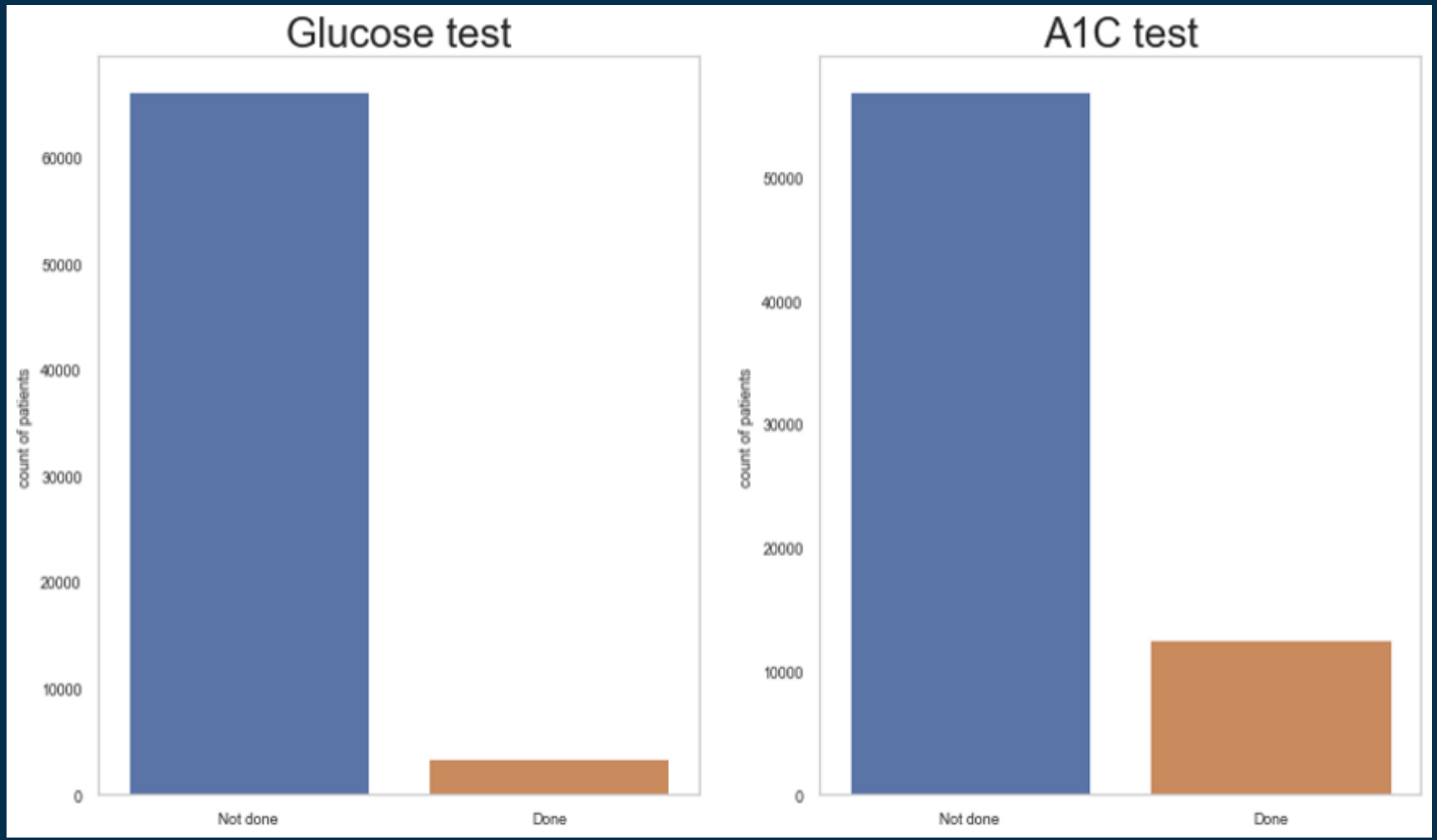
TIME SPENT IN HOSPITAL (AVG PER PATIENT)



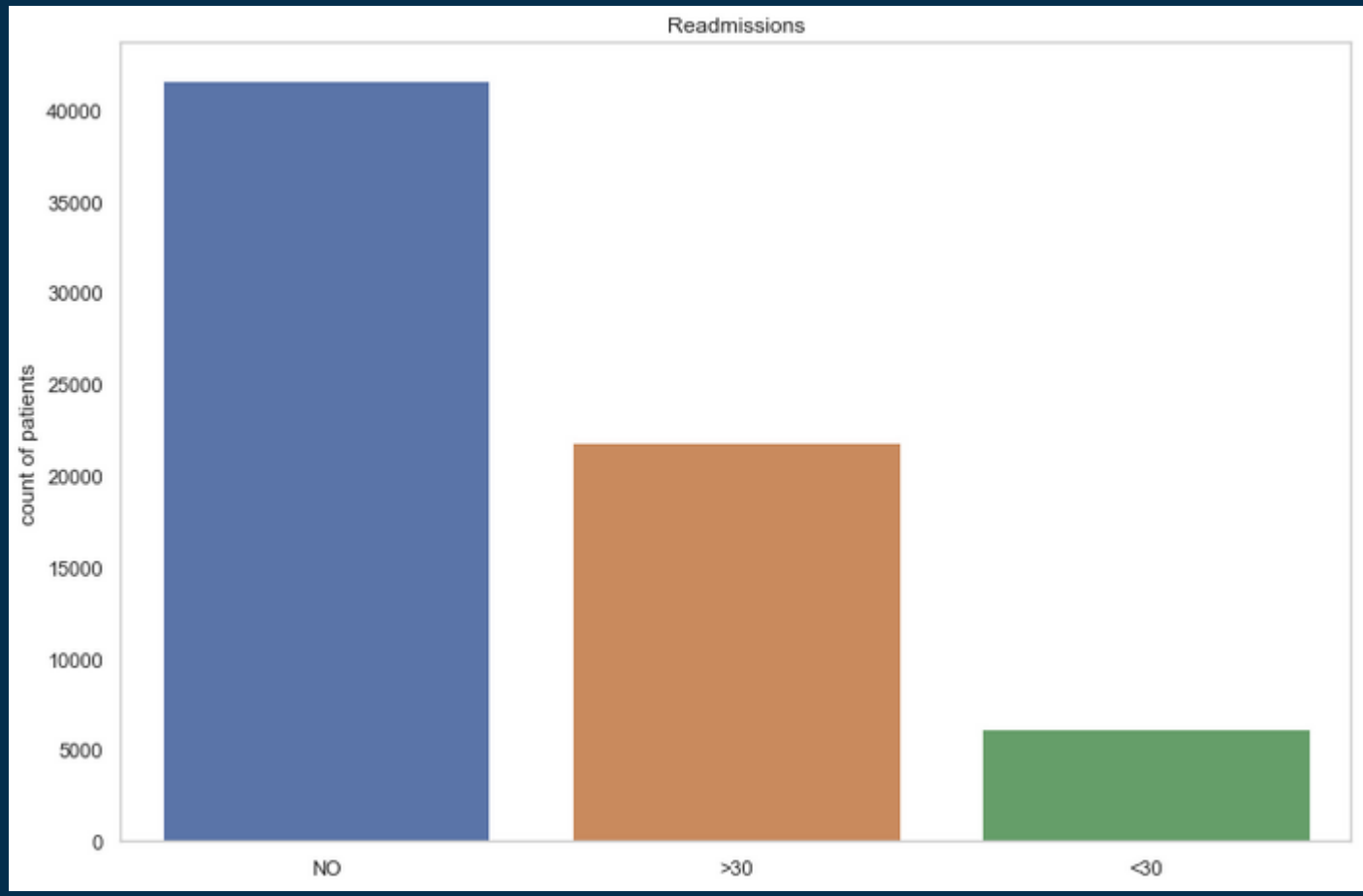
PRIMARY DIAGNOSIS GIVING ENTRY ON US HOSPITALS



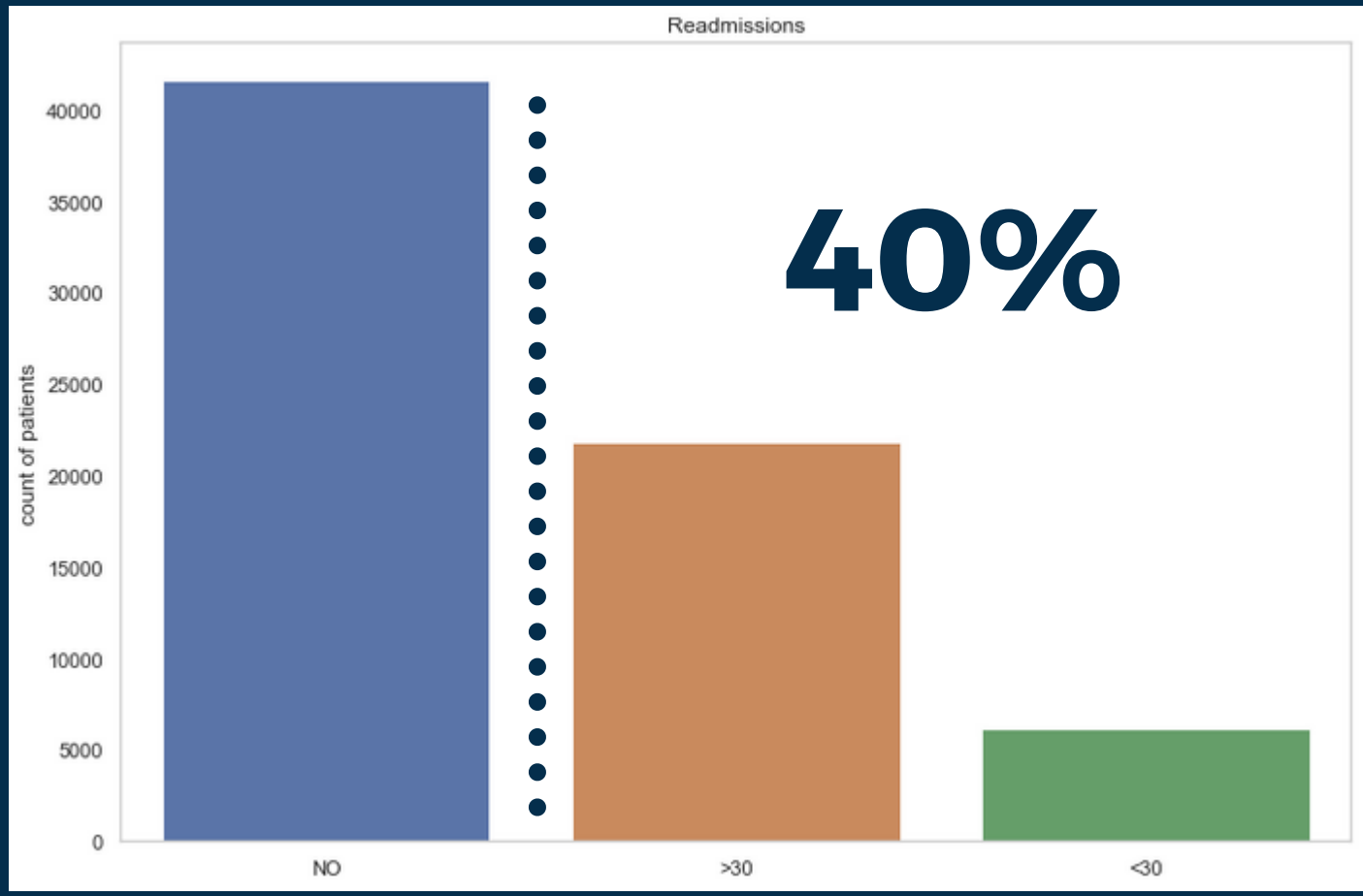
DIABETES COMMON BLOOD TESTS ARE NOT BEING DONE



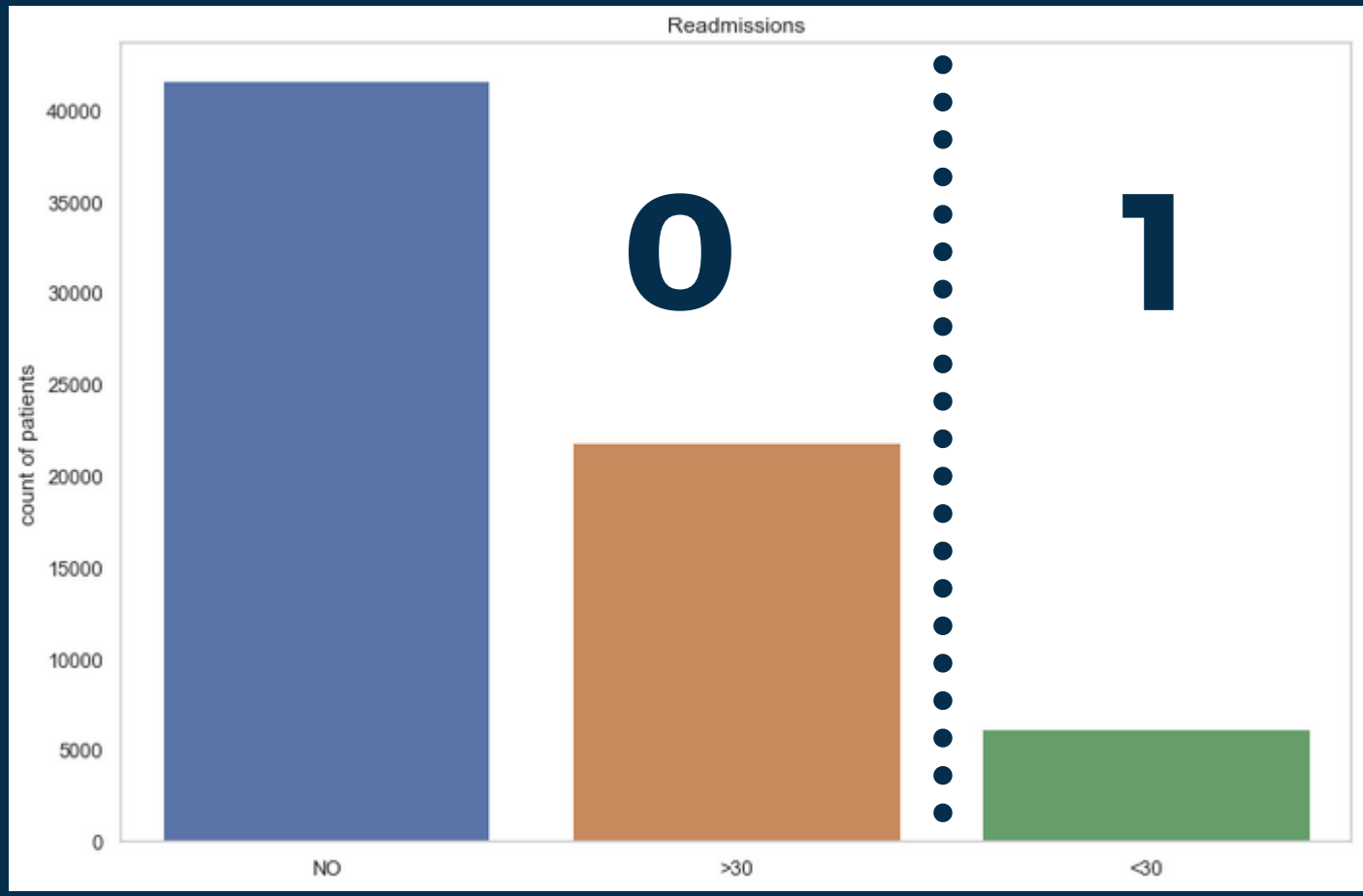
READMISSION OF PATIENTS

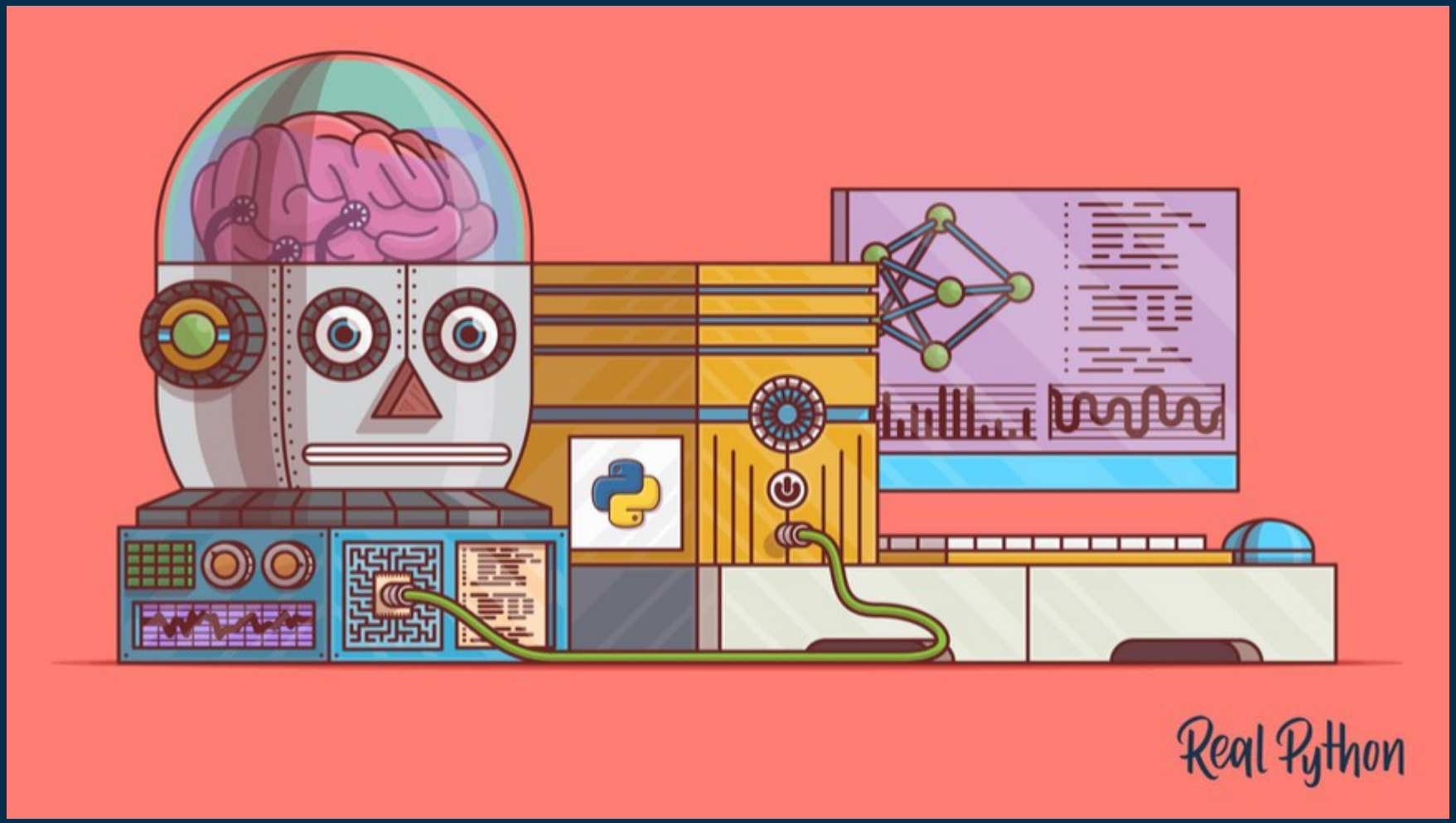


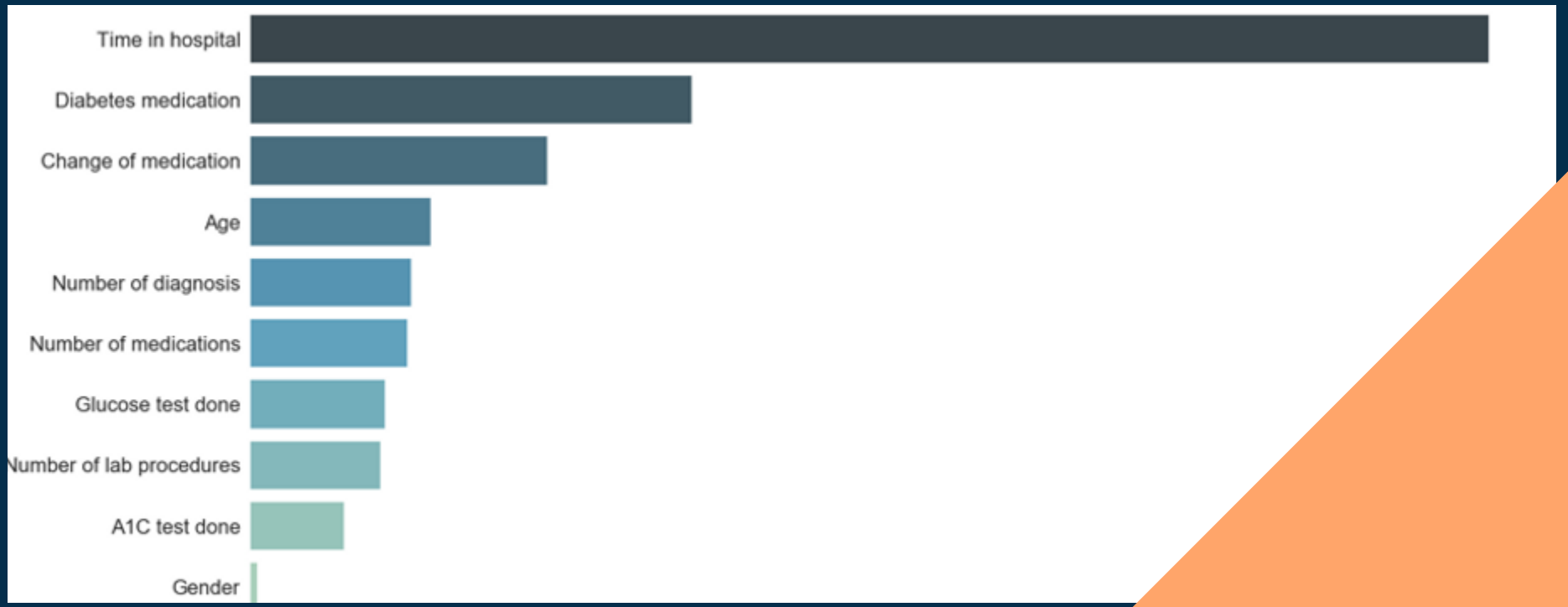
READMISSION OF PATIENTS



READMISSION OF PATIENTS IN LESS THAN 30 DAYS




Real Python



- Time in hospital
- Changes on medication
- Age

What factors are the strongest predictors of hospital readmission?

How well can we predict hospital readmission?

71.12%

Based on factors such as changes on medication, time spent in hospital, age of patient and number of diagnoses, one can predict correctly 71.12% of the times if a patient will come back to the hospital.

Thank you.

Questions?

FILIPA LOPES

encounter_id	readmitted<30
encounter_id	
readmitted<30	1
gender	-0.0026
age	0.043
time_in_hospital	0.053
num_lab_procedures	0.029
num_procedures	-0.00049
num_medications	0.036
number_diagnoses	0.042
max_glu_serum	0.0082
A1Cresult	-0.0074
change	0.016
diabetesMed	0.029