

PREDICTING PROCEDURE TIMES

What I am trying to do

- Medical procedure scheduling is often times mostly a crapshoot
- It is very easy for procedures to get backed up, and waiting times of several hours for the patients, causing some to leave
- Doctors can also be too fast, causing on missed opportunities to schedule extra patients
- Procedures can be thousands of \$ so scheduling well saves \$

Where I got my Data

- I got my data from one Spinal Intervention Specialist at Fresno Surgery Hospital
- The data is given in a clumsy text format which was a headache to clean, however eventually all data is mapped to a clean csv-file
- The data contains a mix of demographic information (name, gender, bmi etc.) , procedure information(type of procedure) and date/time info

Example of Data

DATE: 10/04/16 @ 1352				Fresno Surgical Hospital SCH LIVE				PAGE 1			
USER: GARBMI				Procedure Times by Surgeon/Date with Patient Demographics							
Date	Account Number	Age	Gender	ASA Class	BMI	Procedure Name	Into Rm	Start	End	Procedure Time	Out of Room
01/04/16	V185428	64	F	34.0	LEFT LUMBAR MEDIAL BRANCH RADIOFREQUEN..				1123		1137

Coded Allergy:

NO KNOWN DRUG ALLERGIES

CODEINE

ASPIRIN

Uncoded Allergy:

CPT Code	ICD-10 Code	Insurance
64635	M47.816	BLUE SHIELD HMO
64636	G54.4	
	M51.36	
	M51.06	
	M96.1	
	M54.16	
	M12.88	
	I10	

Objectives

- Eventually I want to predict the total time in the room for each patient
- This will be measured in minutes (Exit Room – Enter Room)
- I will measure my score in RMSE

Average values and Null Accuracy

Average Time: 34.18 MIN

Null Accuracy is using the average value