Hospital Mortality Prediction (Code link)

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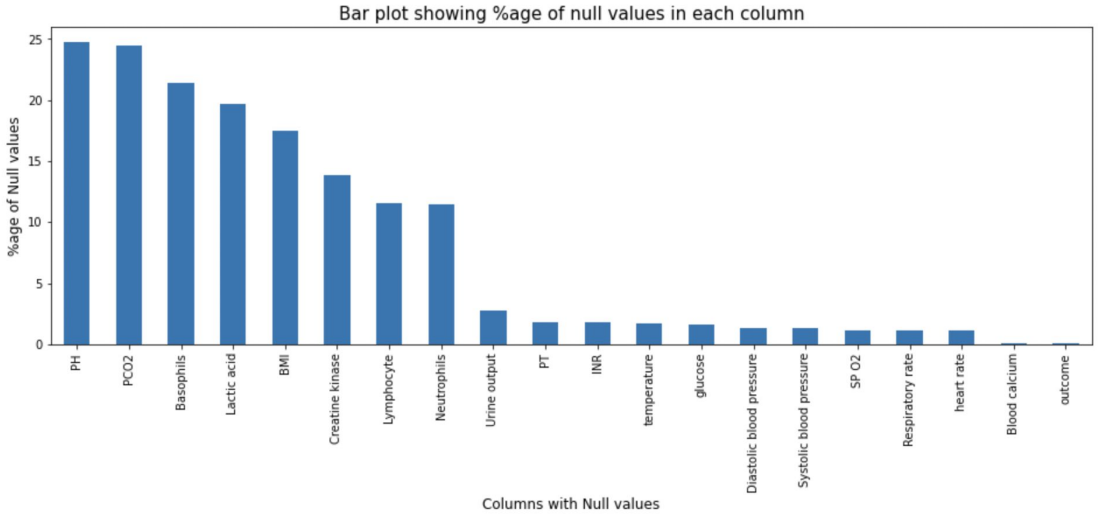
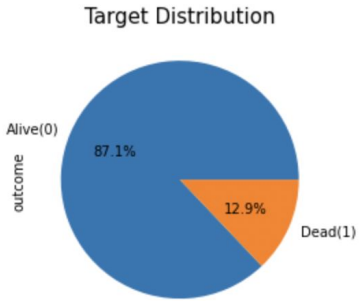
Need to predict the chances of mortality of ICU patients.

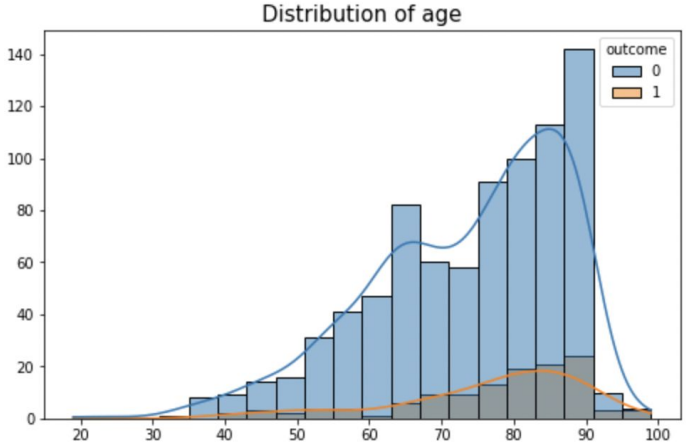
- Dataset Dimensions: 1177 rows, 50 columns
- Null value analysis and removal -



PH	24.764
PCO2	24.449
Basophils	21.406
Lactic acid	19.727
BMI	17.524
Creatine kinase	13.851
Lymphocyte	11.542
Neutrophils	11.438
Urine output	2.728
PT	1.784
INR	1.784
temperature	1.679
glucose	1.574
Diastolic blood pressure	1.364
Systolic blood pressure	1.364
SP O2	1.154
Respiratory rate	1.154
heart rate	1.154
Blood calcium	0.105
outcome	0.105

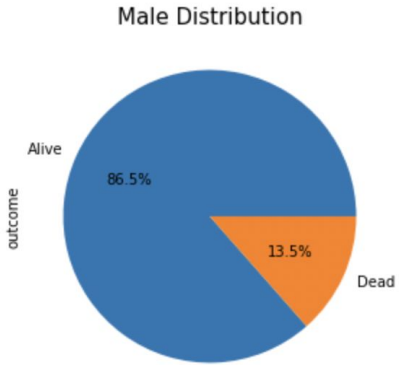
Target Distribution -

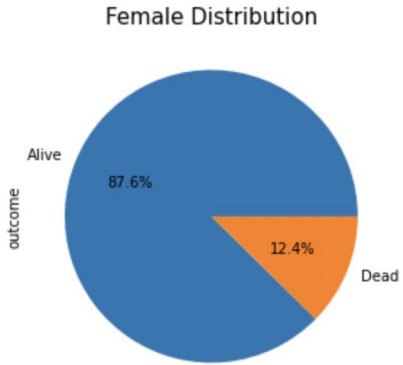


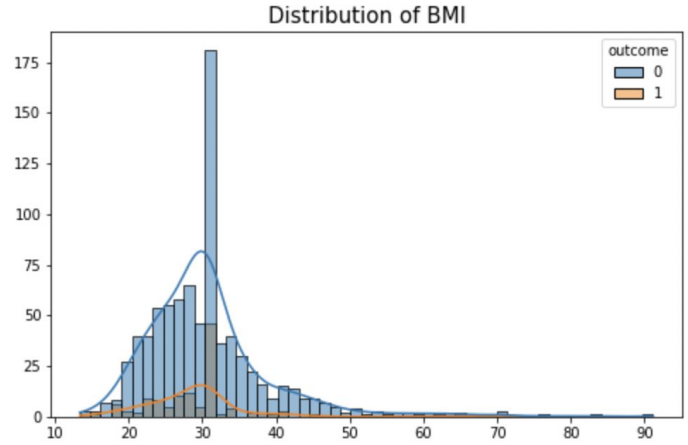


4 Types of Features

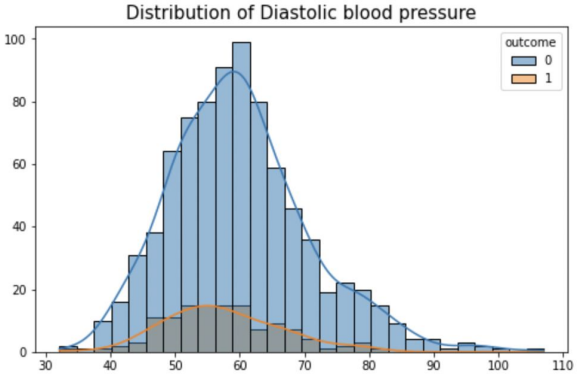
- Type 1: **Demographic features**

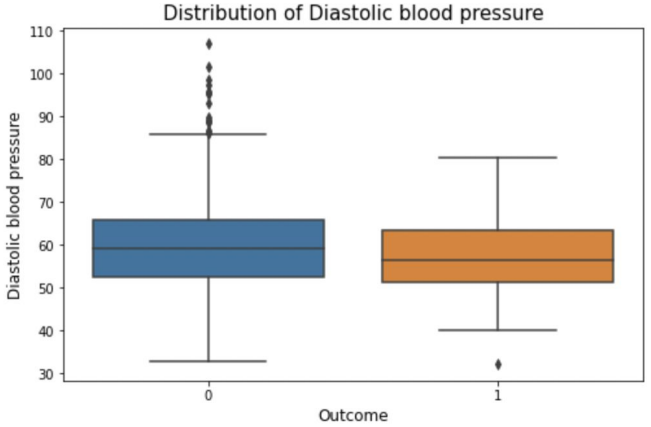




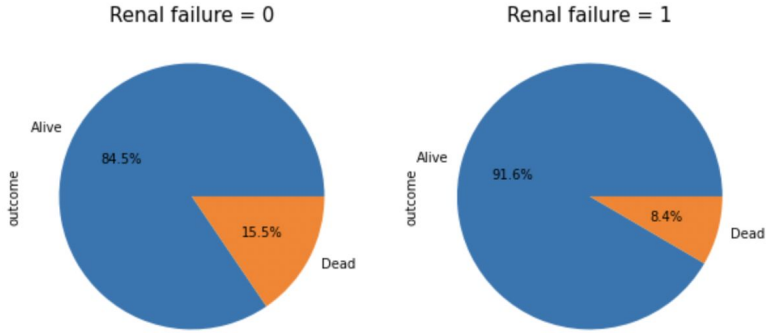


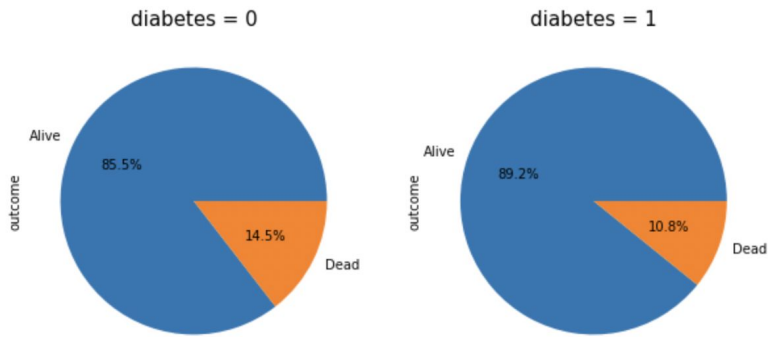
- Type 2: **Vitals**



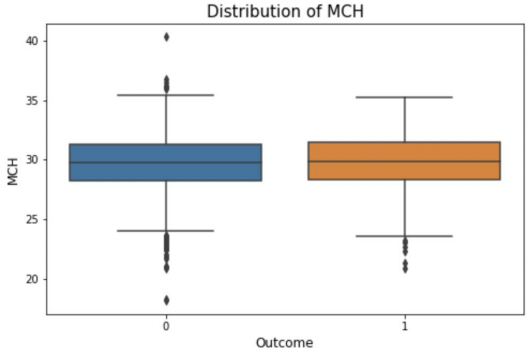


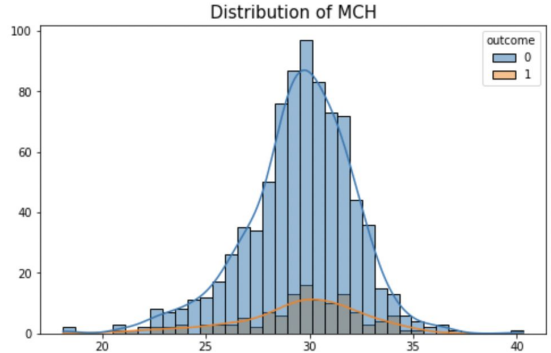
- Type 3: **Comorbidities**

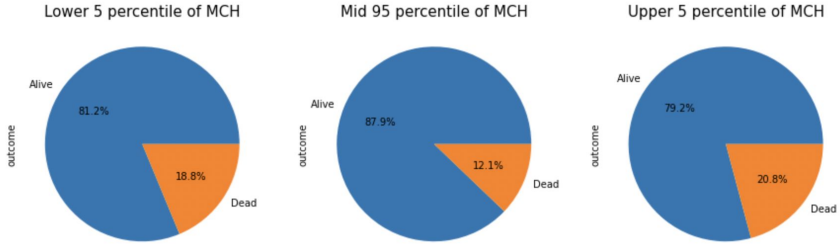




- Type 4: **Lab tests**







Modeling data using Logistic Regression, and interpreting results

```
Train Accuracy -  90.336
Val Accuracy -  90.566
Test Accuracy -  84.746
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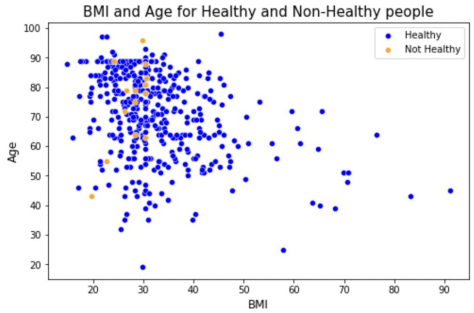

	Healthy	Not_Healthy
hypertensive	0.7454	0.6000
atrialfibrillation	0.3532	0.4667
diabetes	0.5229	0.3333
depression	0.1628	0.0000
Hyperlipemia	0.4771	0.1333
Renal failure	0.4748	0.1333
COPD	0.0665	0.0667
deficiencyanemias	0.4197	0.2000