

Report Overview

This report was created for an overview quality diagnosis of *sepsis_df* data. It was created for **the purpose of judging the validity of variables** before conducting EDA.

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Overview

Data Structures

| division | metrics | value |
|------------|-----------------------|-------|
| size | observations | 455 |
| size | variables | 9 |
| size | values | 4,095 |
| size | memory size (KB) | 0 |
| duplicated | duplicate observation | 0 |
| missing | complete observation | 143 |
| missing | missing observation | 312 |
| missing | missing variables | 3 |
| missing | missing values | 344 |

| division | metrics | value |
|-----------|-----------------|-------|
| data type | numerics | 6 |
| data type | integers | 0 |
| data type | factors/ordered | 0 |
| data type | characters | 3 |
| data type | Dates | 0 |
| data type | POSIXcts | 0 |
| data type | others | 0 |

Table 1: Data structures and types

Job Informations

| division | metrics | value | |
|----------|--------------|----------------------------|--|
| dataset | dataset | sepsis_df | |
| dataset | dataset type | spec_tbl_df | |
| job | samples | 455 / 455 (100%) | |
| job | created | 2023-11-27 17:14:39.019038 | |
| job | created by | dlookr | |
| | | | |

Table 2: Job informations

Warnings

| checks | judgements | removes |
|--------|------------|---------|
| 2 | 7 | 0 |

Table 3: Summary of warnings

| warnings | status | recommand |
|---|-------------|-----------|
| o2del has 287 (63.1%) missing values | missing | judgement |
| temp10 has 56 (12.3%) missing values | missing | judgement |
| apache has 1 (0.2%) missing values | missing | judgement |
| id has high(1.00) cardinality, Maybe identifier | cardinality | check |
| apache has 1 (0.22%) zeros | zero | check |
| temp0 has 28 (6.15%) outliers | outlier | judgement |
| o2del has 7 (1.54%) outliers | outlier | judgement |
| temp10 has 5 (1.1%) outliers | outlier | judgement |
| apache has 3 (0.66%) outliers | outlier | judgement |

Table 4: Warnings in dataset and variables

Variables

| variables | types | missing | cardinality | zero | minus | outlier |
|-----------|-----------|---------|-------------|------|-------|---------|
| id | numeric | | identifier | | | |
| treat | character | | | | | |
| race | character | | | | | |
| fate | character | | | | | |
| apache | numeric | Х | | Χ | | Χ |
| o2del | numeric | Χ | | | | Χ |
| followup | numeric | | | | | |
| temp0 | numeric | | | | | X |
| temp10 | numeric | Х | | | | X |

Table 5: List of variables diagnosis

Missing Values

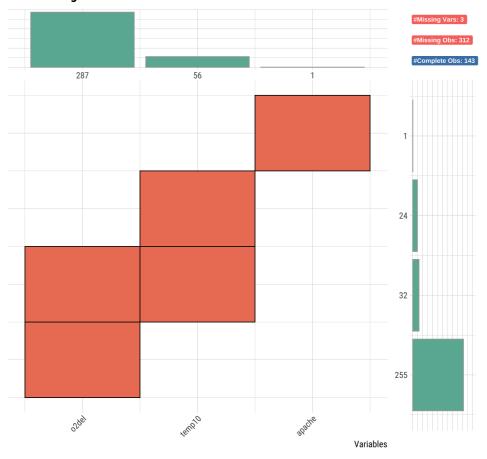
List of Missing Values

| variables | missing_count | missing (%) | status | recommand |
|-----------|---------------|-------------|--------|------------------------|
| o2del | 287 | 63.1% | Remove | Remove Variable |
| temp10 | 56 | 12.3% | NotBad | Model based Imputation |
| apache | 1 | 0.2% | Good | Delete or Imputation |

Table 6: List of variables including missing values

Visualization

Missing with intersection of variables



Unique Values

Categorical Vaiables

No variable with a high proportion greater than 0.5

Numerical Vaiables

No variable with unique data proportion less than 5

Categorical Variable Diagnosis

Top Ranks

| variables | levels | freq | ratio (%) |
|-----------|------------------|------|-----------|
| fate | Alive | 279 | 61.3 |
| fate | Dead | 176 | 38.7 |
| race | White | 293 | 64.4 |
| race | African American | 130 | 28.6 |
| race | Other | 32 | 7.0 |
| treat | Placebo | 231 | 50.8 |
| treat | Ibuprofen | 224 | 49.2 |

Table 7: Top 10 levels of categorical variables

Numerical Variable Diagnosis

Distributions

| variables | min | Q1 | mean | median | Q3 | max | zero | minus | outlier |
|-----------|--------|--------|----------|--------|----------|----------|------|-------|---------|
| id | 1.00 | 114.50 | 228.00 | 228.00 | 341.50 | 455.00 | 0 | 0 | 0 |
| apache | 0.00 | 10.00 | 15.33 | 14.00 | 20.00 | 41.00 | 1 | 0 | 3 |
| o2del | 316.88 | 765.22 | 1,023.82 | 947.20 | 1,229.57 | 2,584.34 | 0 | 0 | 7 |
| followup | 1.00 | 290.00 | 532.58 | 720.00 | 720.00 | 720.00 | 0 | 0 | 0 |
| temp0 | 33.10 | 37.50 | 38.01 | 38.17 | 38.67 | 41.67 | 0 | 0 | 28 |
| temp10 | 33.50 | 36.70 | 37.31 | 37.30 | 37.97 | 40.00 | 0 | 0 | 5 |

Table 8: General list of numerical diagnosis

Zero Values

| variables | min | median | max | zero | zero (%) |
|-----------|-----|--------|-----|------|----------|
| apache | 0 | 14 | 41 | 1 | 0.2 |

Table 9: List of numerical diagnosis (zero)

Negative Values

No numeric variable with negative value

Outliers

List of Outliers

| variables | min | median | max | outlier | outlier (%) |
|-----------|--------|--------|----------|---------|-------------|
| temp0 | 33.10 | 38.17 | 41.67 | 28 | 6.2 |
| o2del | 316.88 | 947.20 | 2,584.34 | 7 | 1.5 |
| temp10 | 33.50 | 37.30 | 40.00 | 5 | 1.1 |
| apache | 0.00 | 14.00 | 41.00 | 3 | 0.7 |

Table 10: Diagnosis of numerical variable outliers

Individual Outliers

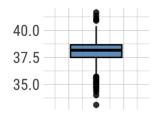
variable: temp0

| Measures | Values |
|-----------------------|----------|
| Outliers count | 28 |
| Outliers ratio (%) | 6.15% |
| Mean of outliers | 36.11508 |
| Mean with outliers | 38.01492 |
| Mean without outliers | 38.1395 |
| | |

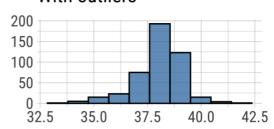
Table 11: temp0

Outlier Diagnosis Plot (temp0)

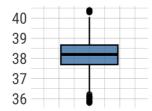
With outliers



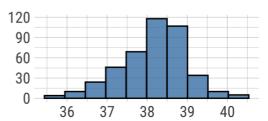
With outliers



Without outliers



Without outliers



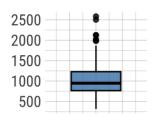
variable: o2del

| Measures | Values |
|-----------------------|----------|
| Outliers count | 7 |
| Outliers ratio (%) | 1.54% |
| Mean of outliers | 2191.781 |
| Mean with outliers | 1023.817 |
| Mean without outliers | 973.036 |

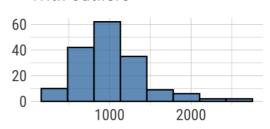
Table 11: o2del

Outlier Diagnosis Plot (o2del)

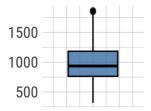
With outliers



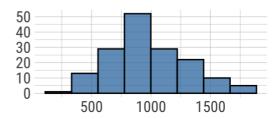
With outliers



Without outliers



Without outliers



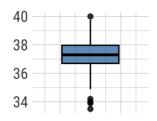
variable: temp10

| Measures | Values |
|-----------------------|----------|
| Outliers count | 5 |
| Outliers ratio (%) | 1.1% |
| Mean of outliers | 35.12 |
| Mean with outliers | 37.31448 |
| Mean without outliers | 37.34233 |

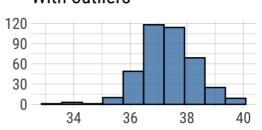
Table 11: temp10

Outlier Diagnosis Plot (temp10)

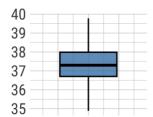
With outliers



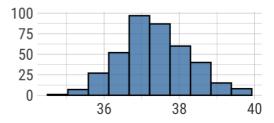
With outliers



Without outliers



Without outliers



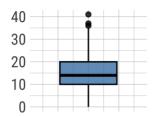
variable: apache

| Measures | Values |
|-----------------------|---------|
| Outliers count | 3 |
| Outliers ratio (%) | 0.66% |
| Mean of outliers | 38 |
| Mean with outliers | 15.3304 |
| Mean without outliers | 15.1796 |

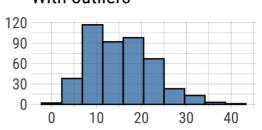
Table 11: apache

Outlier Diagnosis Plot (apache)

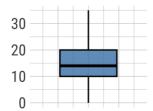
With outliers



With outliers



Without outliers



Without outliers

