



Titanic Naive Bayes Model

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Original Dataset

| | | | / | | | | | | | | | | |
|--|----|-------------|----------|--------|---|--------|------|-------|-------|---------------------|---------|-------|----------|
| | | Passengerld | Survived | Pclass | Name | Sex | Age | SibSp | Parch | Ticket | Fare | Cabin | Embarked |
| | 0 | 1 | 0 | 3 | Braund, Mr. Owen Harris | male | 22.0 | 1 | 0 | A/5 21171 | 7.2500 | NaN | s |
| | 1 | 2 | 1 | 1 | Cumings, Mrs. John Bradley (Florence Briggs Th | female | 38.0 | 1 | 0 | PC 17599 | 71.2833 | C85 | С |
| | 2 | 3 | 1 | 3 | Heikkinen, Miss. Laina | female | 26.0 | 0 | 0 | STON/02. 3101282 | 7.9250 | NaN | s |
| | 3 | 4 | 1 | 1 | Futrelle, Mrs. Jacques Heath (Lily May Peel) | female | 35.0 | 1 | 0 | 113803 | 53.1000 | C123 | s |
| | 4 | 5 | 0 | 3 | Allen, Mr. William Henry | male | 35.0 | 0 | 0 | 373450 | 8.0500 | NaN | s |
| | 5 | 6 | 0 | 3 | Moran, Mr. James | male | NaN | 0 | 0 | 330877 | 8.4583 | NaN | Q |
| | 6 | 7 | 0 | 1 | McCarthy, Mr. Timothy J | male | 54.0 | 0 | 0 | 17463 | 51.8625 | E46 | s |
| | 7 | 8 | 0 | 3 | Palsson, Master. Gosta Leonard | male | 2.0 | 3 | 1 | 349909 | 21.0750 | NaN | s |
| | 8 | 9 | 1 | 3 | Johnson, Mrs. Oscar W (Elisabeth Vilhelmina Berg) | female | 27.0 | 0 | 2 | 347742 | 11.1333 | NaN | s |
| | 9 | 10 | 1 | 2 | Nasser, Mrs. Nicholas (Adele Achem) | female | 14.0 | 1 | 0 | 237736 | 30.0708 | NaN | С |
| | 10 | 11 | 1 | 3 | Sandstrom, Miss. | female | 4.0 | 1 | 1 | PP 9549 | 16.7000 | G6 | s |





Dataset after Cleaning

| | Survived | Sex | Age | SibSp | Fare |
|----|----------|--------|------|-------|---------|
| 0 | 0 | male | 22.0 | 1 | 7.2500 |
| 1 | 1 | female | 38.0 | 1 | 71.2833 |
| 2 | 1 | female | 26.0 | 0 | 7.9250 |
| 3 | 1 | female | 35.0 | 1 | 53.1000 |
| 4 | 0 | male | 35.0 | 0 | 8.0500 |
| 5 | 0 | male | NaN | 0 | 8.4583 |
| 6 | 0 | male | 54.0 | 0 | 51.8625 |
| 7 | 0 | male | 2.0 | 3 | 21.0750 |
| 8 | 1 | female | 27.0 | 0 | 11.1333 |
| 9 | 1 | female | 14.0 | 1 | 30.0708 |
| 10 | 1 | female | 4.0 | 1 | 16.7000 |
| 11 | 1 | female | 58.0 | 0 | 26.5500 |
| 12 | 0 | male | 20.0 | 0 | 8.0500 |
| 13 | 0 | male | 39.0 | 1 | 31.2750 |
| 14 | 0 | female | 14.0 | 0 | 7.8542 |
| 15 | 1 | female | 55.0 | 0 | 16.0000 |
| 16 | 0 | male | 2.0 | 4 | 29.1250 |
| 17 | 1 | male | NaN | 0 | 13.0000 |
| 18 | 0 | female | 31.0 | 1 | 18.0000 |
| 19 | 1 | female | NaN | 0 | 7.2250 |
| 20 | 0 | male | 35.0 | 0 | 26.0000 |
| 21 | 1 | male | 34.0 | 0 | 13.0000 |
| 22 | 1 | female | 15.0 | 0 | 8.0292 |
| 23 | 1 | male | 28.0 | 0 | 35.5000 |
| 24 | 0 | female | 8.0 | 3 | 21.0750 |
| 25 | 1 | female | 38.0 | 1 | 31.3875 |
| 26 | 0 | male | NaN | 0 | 7.2250 |
| T | | | | | |





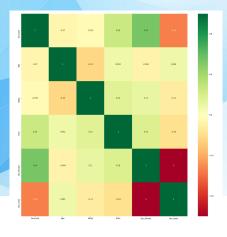
Obtaining Dummies for Gender

| Г | Survived | Age | SibSp | Fare | Sex_female |
|----|----------|-----------|-------|----------|------------|
| 0 | 0 | 22.000000 | 1 | 7.2500 | 0 |
| 1 | 1 | 38.000000 | 1 | 71.2833 | 1 |
| 2 | 1 | 26.000000 | 0 | 7.9250 | 1 |
| 3 | 1 | 35.000000 | 1 | 53.1000 | 1 |
| 4 | 0 | 35.000000 | 0 | 8.0500 | 0 |
| 5 | 0 | 29.699118 | 0 | 8.4583 | 0 |
| 6 | 0 | 54.000000 | 0 | 51.8625 | 0 |
| 7 | 0 | 2.000000 | 3 | 21.0750 | 0 |
| 8 | 1 | 27.000000 | 0 | 11.1333 | 1 |
| 9 | 1 | 14.000000 | 1 | 30.0708 | 1 |
| 10 | 1 | 4.000000 | 1 | 16.7000 | 1 |
| 11 | 1 | 58.000000 | 0 | 26.5500 | 1 |
| 12 | 0 | 20.000000 | 0 | 8.0500 | 0 |
| 13 | 0 | 39.000000 | 1 | 31.2750 | 0 |
| 14 | 0 | 14.000000 | 0 | 7.8542 | 1 |
| 15 | 1 | 55.000000 | 0 | 16.0000 | 1 |
| 16 | 0 | 2.000000 | 4 | 29.1250 | 0 |
| 17 | 1 | 29.699118 | 0 | 13.0000 | 0 |
| 18 | 0 | 31.000000 | 1 | 18.0000 | 1 |
| 19 | 1 | 29.699118 | 0 | 7.2250 | 1 |
| 20 | 0 | 35.000000 | 0 | 26.0000 | 0 |
| 21 | 1 | 34.000000 | 0 | 13.0000 | 0 |
| 22 | 1 | 15.000000 | 0 | 8.0292 | 1 |
| 23 | 1 | 28.000000 | 0 | 35.5000 | 0 |
| 24 | 0 | 8.000000 | 3 | 21.0750 | 1 |
| 25 | 1 | 38.000000 | 1 | 31.3875 | 1 |
| 26 | 0 | 29.699118 | 0 | 7.2250 | 0 |
| 27 | 0 | 19.000000 | 3 | 263.0000 | 0 |





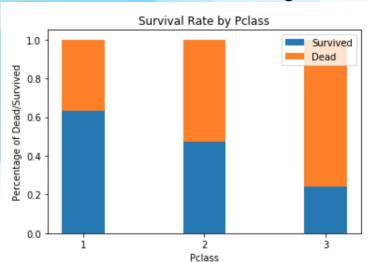
Heatmap of Dataset







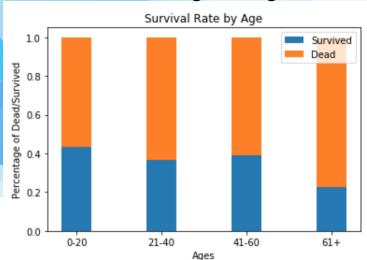
Survival vs Pclass Histogram







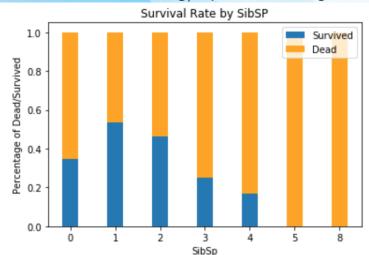
Survival vs Age Histogram







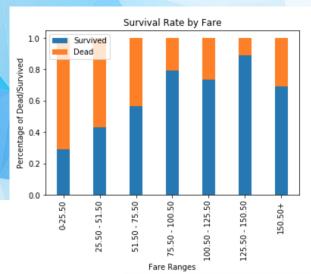
Survival vs Sibling/Spouse Histogram







It's Not Fare







Conclusion

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