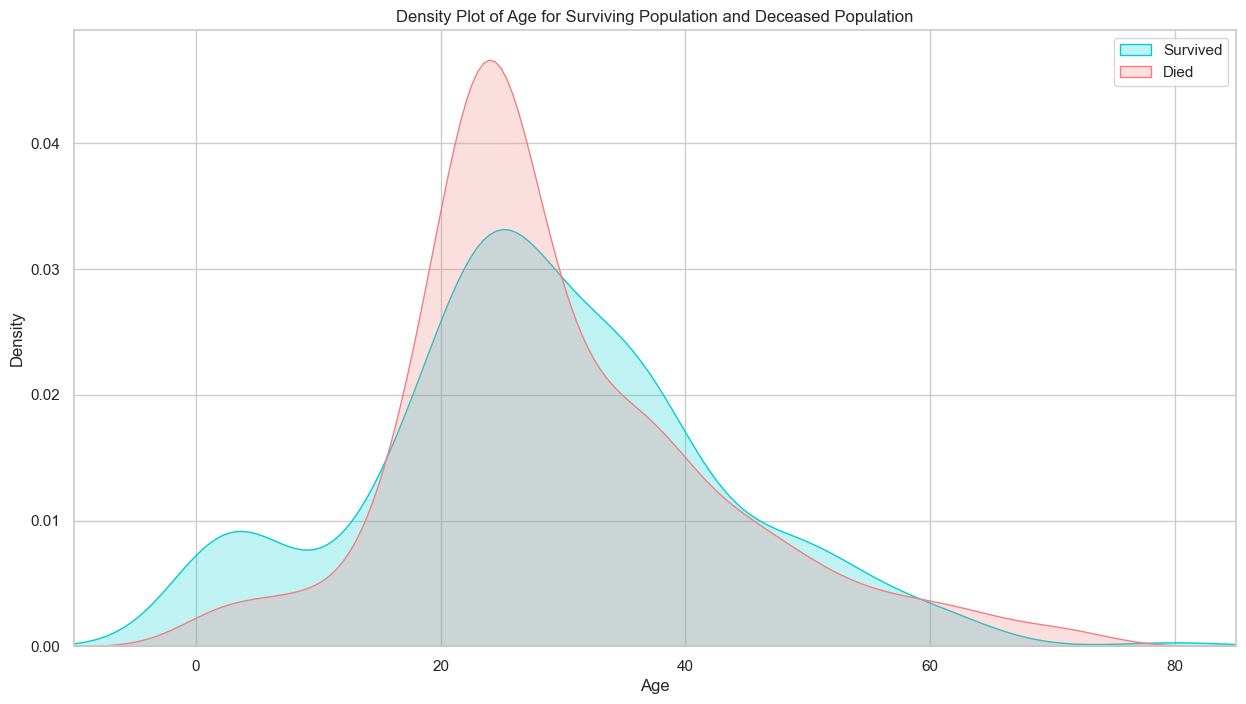
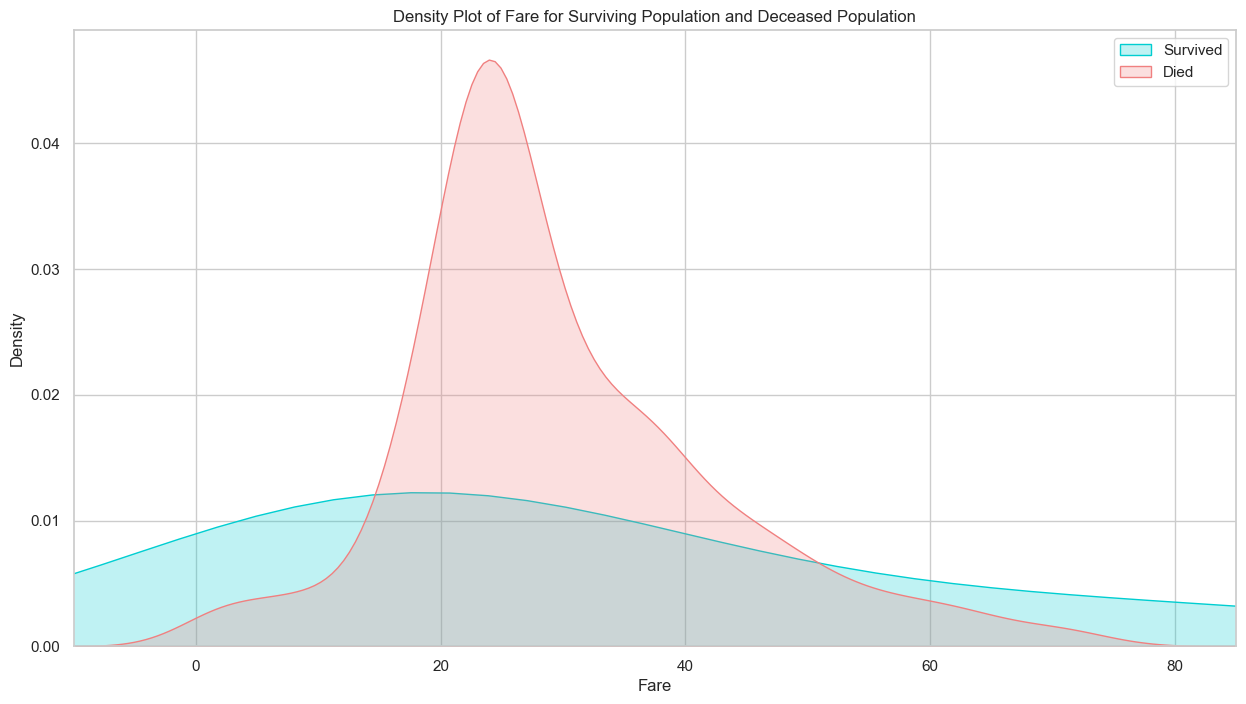


Entropy (‘Age’ column)

1. Use logistic regression to predict the survivors
2. Run diagnostics on my results





Decision tree (pruned and feature engineered)

A diagram of a company structure

Description automatically generated

A chart of a number of colored squares

Description automatically generated with medium confidence

Confusion matrix (decision tree)

Recall: 0.7134502923976608

Precision: 0.8052805280528053 (% of true positives that were correctly classified)

**A chart of a number of colored squares

Description automatically generated with medium confidence**

**Confusion matrix - support vector machine**

**Recall:  0.6812865497076024**

**Precision:  0.7420382165605095**

**(lower recall and precision)**

**Key takeaways: The support vector machine doesn’t do as great a job as the decision tree.**

A yellow blue and purple squares with white text

Description automatically generated

**Confusion matrix: Logistic regression**

**Overall, logistic regression produces the most accurate results.**

precision: 0.7373737373737373

recall: 0.7448979591836735

**Random Forest Classifier**

|  | **Precision** | **Recall** | **Accuracy** |
| --- | --- | --- | --- |
| 0 | 0.985247 | 0.985247 | 0.985955 |

**Base model vs. Fine tuned model**

|  | **Precision** | **Recall** | **Accuracy** |
| --- | --- | --- | --- |
| base model | 0.802189 | 0.790693 | 0.815642 |
| fine tuned model | 0.985247 | 0.985247 | 0.985955 |

**A screenshot of a graph

Description automatically generated**

**Random forest classifier – confusion matrix**

**<Classifiers>**

**Logistic Regression**