

Model comparison- Walmart case study

Models used:

- 1) Logistic regression (with and without hyperparameter testing)
- 2) Decision tree

Benefits of each method:

- 1) Logistic regression:
 - Better with high dimension data
- 2) Decision trees:
 - More robust to outliers, skewed data

Interpretation of results from both methods

| | Logistic regression (with auto-tuning) | Decision tree |
|----------------------------------|--|---------------|
| Accuracy on validation dataset | 0.87 | 0.82 |
| AUC | 0.77 | 0.58 |
| True positives + True Negatives | 10006 | 9516 |
| False positives+ False negatives | 1494 | 1984 |

Conclusion: The logistic regression model is performing better on all performance measures and classifying outcomes more correctly.