# Predicting revenue from online shopper behavior

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# Problem Statement

- Predict what type of behavior leads to to an online purchase

- Classification Problem

# Business Value

- Identify online shopping behavior trends that lead to revenue
- Adjust marketing strategy to capitalize on revenue generating trends
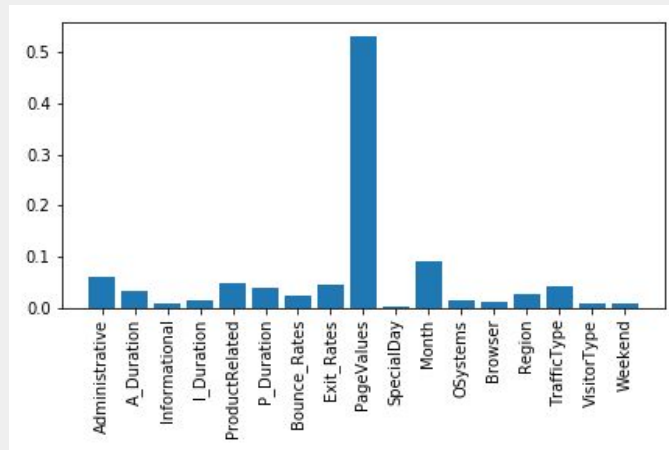
# Methodology

| Model | Precision % | Recall % | Accuracy % | F1 Score % |
|-------|-------------|----------|------------|------------|
| Logistic Regression | 88 | 84 | 86 | 85 |
| Decision Tree | 100 | 100 | 100 | 100 |
| Bagged Trees | 90 | 91 | 91 | 91 |
| Random Forest | 89 | 91 | 90 | 90 |
| Gradient Boost | 93 | 94 | 93 | 93 |

The decision tree classified revenue occurrence optimally.

Receiver operating characteristic (ROC) Curve
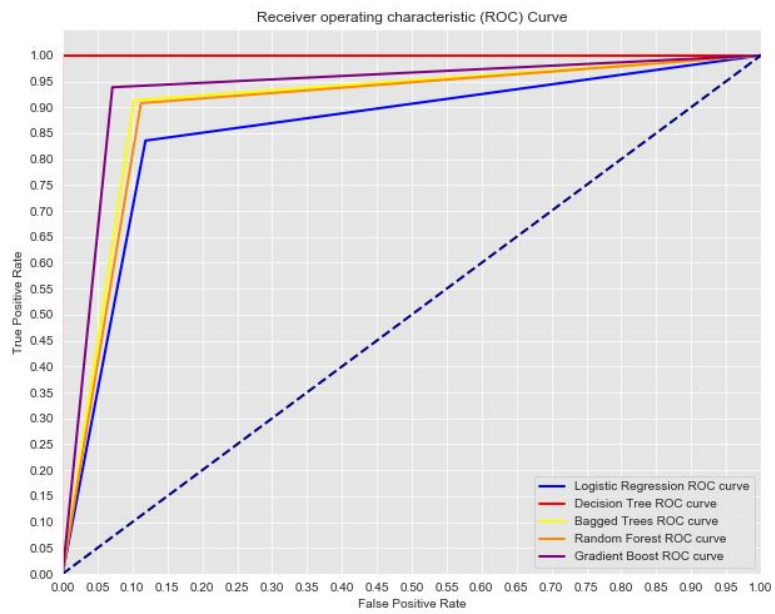
# Findings



The feature that is the most likely positive predictor for revenue is PageValue, the average amount of times a page leads to revenue.  Month also is a likely positive predictor because during certain months of the year consumers purchase more.

# Future Work

- Build more predictive models
- Learn predictive modeling mechanics

# Thank you