

Model Results:

- Accuracy: 1.00
- Precision: 1.00
- Recall: 1.00

1. Evaluation Metric Choice:

- Precision and recall are more relevant than accuracy because:
- False positives (predicting profitable when not) could lead to wasted resources
- False negatives (missing profitable campaigns) could mean lost opportunities
- The balance between precision and recall depends on business priorities

2. Overfitting Analysis:

- Compare train vs test performance
- If train accuracy is much higher than test accuracy, it suggests overfitting
- Regularization or simpler models could help if overfitting is detected
- As the dataset is so small in this case, overfitting is expected

3. Business Context:

- Predict profitability of new campaigns before launch
- Optimize budget allocation across channels
- Identify characteristics of profitable campaigns
- Monitor model performance regularly as market conditions change
- Combine with domain expertise for final decisions

The model provides a data-driven approach to campaign evaluation, but should be used as one input among others in the decision-making process.