

Component 5: Final Model Selection & Business Impact

This section documents the final machine learning model selected for predicting employee promotion eligibility. Based on extensive experimentation and evaluation of multiple models, the Random Forest Classifier was chosen for its balanced performance, robustness, and business interpretability.

Why Random Forest?

Random Forest effectively captures non-linear relationships in employee performance data, handles mixed data types, and provides feature importance insights. These qualities make it suitable for real-world HR decision-making.

Business Impact

The model enables fair and data-driven promotions, improves talent retention, reduces bias, and supports strategic workforce planning.