Kaggle Playground Series 2025: Introvert/Extrovert Prediction Challenge

Welcome to the 2025 Kaggle Playground Series! This presentation outlines the Introvert/Extrovert Prediction Challenge, designed to sharpen your machine learning skills with an engaging dataset. We'll cover the competition objective, evaluation metrics, timeline, and an overview of model performance.

Competition Overview

The Goal

Predict whether an individual is an **Introvert** or **Extrovert** based on their social behavior and personality traits. This challenge provides an approachable dataset for practicing classification techniques.

Series Spirit

The Playground Series offers monthly competitions with interesting, approachable datasets for machine learning practice. These challenges use synthetically-generated data to balance real-world relevance with test label privacy.

Evaluation Criteria and Submission Format

Evaluation Metric

Submissions are evaluated using the **Accuracy Score** between the predicted personality type and the observed target. Higher accuracy indicates a better-performing model.

Submission File Format

Your submission file must contain a header and predict the 'Personality' (Introvert/Extrovert) for each 'id' in the test set. Example format:

```
id,Personality18524,Extrovert18525,Introvert18526,Introvertetc.
```

Key Competition Deadlines

1

June 30, 2025

Start Date: The competition officially begins, and the dataset becomes available for download.

2

July 31, 2025

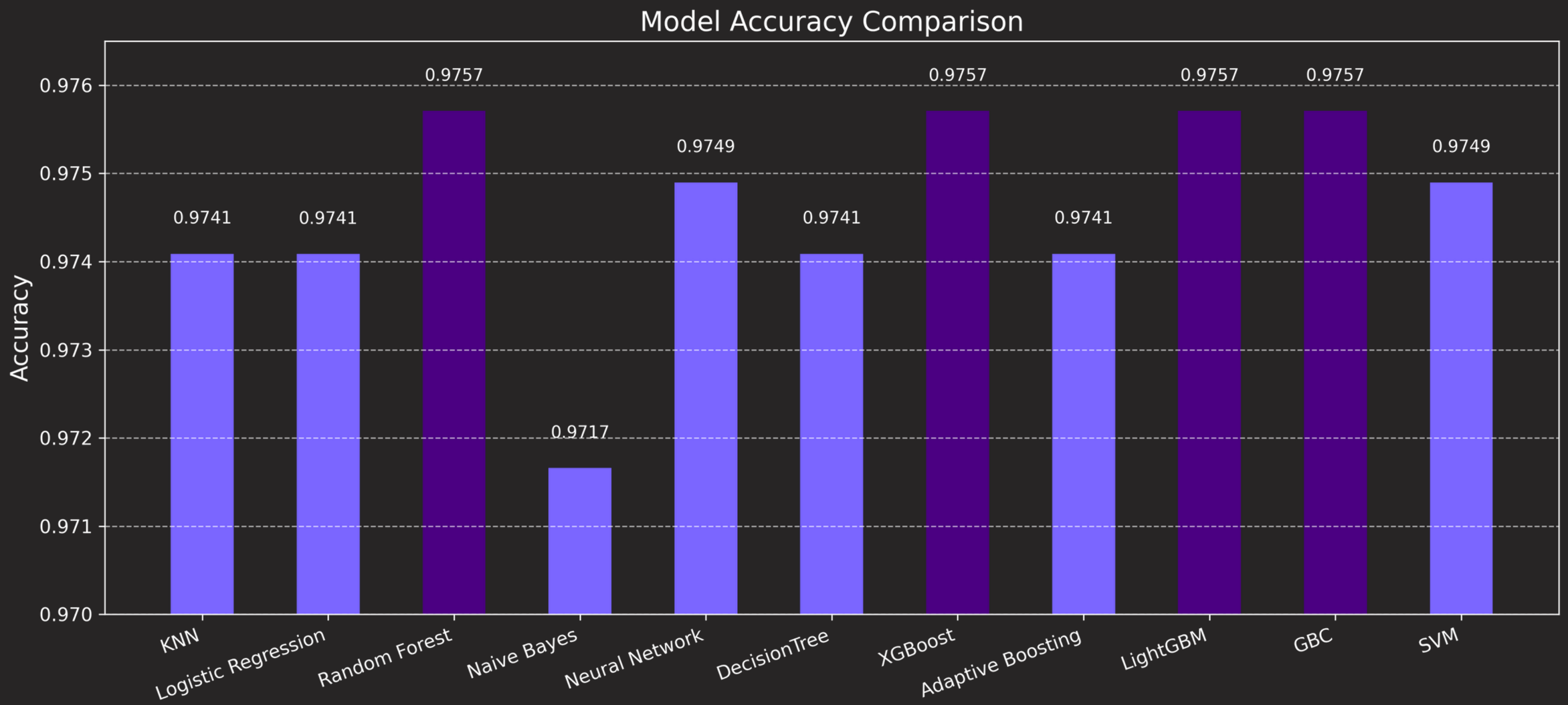
Entry Deadline: Last day to join the competition. **Team Merger Deadline:** Final date for teams to merge. **Final Submission Deadline:** All predictions must be submitted by 11:59 PM UTC.

All deadlines are 11:59 PM UTC unless specified. Organizers reserve the right to update the timeline.

Models Accuracy

Algorithms	Accuracy
Logistic Regrerission	0.974086
K-NN	0.974089
Random Forest	0.975708
Naive Bayes	0.971659
Neural Network	0.974898
DecisionTree	0.974089
neural network	0.974898
Adaptive Boosting	0.974089
LightGBM	0.975708
GBC	0.975708
SVM	0.974898
XGBoost	0.975708

Model Performance Analysis



Top-Performing Model: Random Forest

Random Forest Classification

Achieved the highest accuracy score of **0.975708** among the evaluated models, securing a top standing in the competition.

Standing: 1235

0.975708

Accuracy Score

Highest observed accuracy.

1235

Rank

Achieved by the top model.

Citation and Feedback

> **Walter Reade and Elizabeth Park.** Predict the Introverts from the Extroverts. https://kaggle.com/competitions/playground-series-s5e7, 2025. Kaggle.

Your feedback on the datasets for different competitions is invaluable. Please share your insights so we can continue to improve the quality of future challenges.

Our Team

We're dedicated to advancing machine learning and data science. Connect with us on LinkedIn!

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