AI Feature Engineering Advisor Report

1. About This Report

This report provides feature engineering recommendations generated to help beginner data science students understand how to prepare data for machine learning models.

2. Feature Recommendations

Feature: Survived (int64)

- For the feature 'Survived', the recommended action is 'No Transformation Needed'. This is suggested because feature already well distributed. Applying this step helps machine learning models learn more stable and reliable patterns from the data.

Feature: Pclass (int64)

- For the feature 'Pclass', the recommended action is 'No Transformation Needed'. This is suggested because feature already well distributed. Applying this step helps machine learning models learn more stable and reliable patterns from the data.

Feature: Name (object)

- For the feature 'Name', the recommended action is 'Drop Feature'. This is suggested because identifier column with unique values for each row. Applying this step helps machine learning models learn more stable and reliable patterns from the data.

Feature: Sex (object)

- For the feature 'Sex', the recommended action is 'One-Hot Encoding'. This is suggested because low number of categories, safe for most models. Applying this step helps machine learning models learn more stable and reliable patterns from the data.

Feature: Age (float64)

- For the feature 'Age', the recommended action is 'Median Imputation'. This is suggested because handles missing values without being affected by outliers. Applying this step helps machine learning models learn more stable and reliable patterns from the data.

Feature: SibSp (int64)

- For the feature 'SibSp', the recommended action is 'Log Transformation'. This is suggested because reduces skewness and improves model stability. Applying this step helps machine learning models learn more stable and reliable patterns from the data.

Feature: Parch (int64)

- For the feature 'Parch', the recommended action is 'Log Transformation'. This is suggested because reduces skewness and improves model stability. Applying this step helps machine learning models learn more stable and reliable patterns from the data.

Feature: Ticket (object)

- For the feature 'Ticket', the recommended action is 'Target Encoding'. This is suggested because high cardinality, avoids large sparse vectors. Applying this step helps machine learning models learn more stable and reliable patterns

from the data.

Feature: Fare (float64)

- For the feature 'Fare', the recommended action is 'Log Transformation'. This is suggested because reduces skewness and improves model stability. Applying this step helps machine learning models learn more stable and reliable patterns from the data.

Feature: Cabin (object)

- For the feature 'Cabin', the recommended action is 'Drop Feature'. This is suggested because too many missing values, model may learn wrong patterns. Applying this step helps machine learning models learn more stable and reliable patterns from the data.

Feature: Embarked (object)

- For the feature 'Embarked', the recommended action is 'One-Hot Encoding'. This is suggested because low number of categories, safe for most models. Applying this step helps machine learning models learn more stable and reliable patterns from the data.