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[Report Name]

PREDICTA 1.0

By [Team Name/Your Name]

[Your University]

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# Summary

**1.1 Overview of Approach and Key Findings**

* + - A brief summary of the methodology used in both Problem 1 (Time Series Prediction) and Problem 2 (Classification). Include key findings and insights derived from the analysis.

**1.2 GitHub Repository**

* + - Provide the link to the public GitHub repository containing the code used for both problems.

1. Problem 1: Time Series Prediction

**2.1 Data Understanding and Preprocessing**

* + - Detailed exploration of the historical weather dataset (historical\_weather.csv).
    - Description of data cleaning and preprocessing steps specific to time series forecasting.

**2.2 Feature Selection and Engineering**

* + - Explanation of new features created from time series data.
    - Justification for selecting specific features relevant to time series forecasting.

**2.3 Model Selection and Training**

* + - Description of time series forecasting models used (e.g., ARIMA, LSTM).
    - Details on hyperparameter tuning and model selection process.

**2.4 Results and Discussion**

* + - Evaluation metrics, forecasting results, and performance analysis.
    - Discussion of model performance and insights gained.

**2.5 Conclusion**

* + - Summary of findings and conclusions for Problem 1.
    - Recommendations for future improvements.

1. Problem 2: Classification Problem

**3.1 Data Understanding and Preprocessing**

* + - Exploration of the daily weather dataset (daily\_data.csv).
    - Methods used for data cleaning and preprocessing tailored for classification tasks.

**3.2 Feature Selection and Engineering**

* + - Features selected for weather condition classification.
    - Explanation of feature engineering decisions.

**3.3 Model Selection and Training**

* + - Description of classification algorithms used (e.g., Random Forest, SVM).
    - Approach to model parameter tuning and selection.

**3.4 Results and Discussion**

* + - Performance metrics for weather condition classification.
    - Analysis of classification results and model effectiveness.

**3.5 Conclusion**

* + - Summary of findings and conclusions for Problem 2.
    - Recommendations for future enhancements.

1. References (If applicable)

**4.1 List of References**

* + - Include citations and resources used throughout the report for methodologies, algorithms, and datasets.

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