Tourism Prediction Model for Jammu & Kashmir (2025–2028)

- END-TERM PROJECT PRESENTATION
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Introduction

- • Jammu & Kashmir is a major tourist destination.
- • Forecasting tourist numbers is essential for planning.
- • Project aims to build a prediction model using real holiday data.

Problem Statement

- • Lack of accurate forecasting tools for tourism in J&K.
- • No integration of holidays/festivals in prediction models.
- • Need for smarter tools for tourism planning.

Objectives

- • Predict monthly tourist influx (2025–2028).
- • Integrate Indian and local holiday data.
- • Train a machine learning model for forecasting.

Dataset

- • Custom dataset (2020–2024).
- • Features: Year, Month, Place, Festival, Tourist_Count.
- • Derived Holiday_Flag using Python’s `holidays` library.

Technologies Used

- • Python (pandas, scikit-learn, matplotlib).
- • ML Model: Random Forest Regressor.
- • Visualizations for feature importance and predictions.

Preprocessing Steps

- • Converted month names to numbers.
- • Label encoded places and festivals.
- • Added holiday flag.
- • Handled missing values and formats.

Model Training

- • Model: Random Forest Regressor.
- • Input: Year, Month, Place, Festival, Holiday_Flag.
- • Target: Tourist_Count.
- • Trained on 2020–2024 data.

Predictions (2025–2028)

- • Model generated tourist forecasts for each month.
- • Predictions based on holidays and seasonal trends.
- • Saved to CSV for analysis.

Challenges

- • Manually added holidays not in library.
- • Sparse public data for J&K tourism.
- • Needed to preprocess and clean data carefully.

Conclusion

- • Accurate model to predict tourist traffic.
- • Holidays have a major impact.
- • Useful for tourism boards, hoteliers, transport sector.

Thank You

Questions?

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