Tourism Advisor using AWS SageMaker

# 1. Introduction

The Tourism Advisor is a machine learning-powered system designed to recommend travel destinations based on user preferences. This project uses AWS SageMaker to train and deploy a model that takes input features such as trip type, mode of transport, budget, and number of days to suggest ideal tourist spots.

# 2. Problem Statement

Travelers often find it difficult to select destinations that align with their preferences, budget, and travel duration. This system aims to simplify this decision-making process by providing smart destination suggestions using a trained machine learning model.

# 3. Dataset Description

The custom dataset consists of the following features:

•Trip Type (e.g., Adventure, Relaxation, Cultural, Romantic)

• Mode of Transport (e.g., Car, Bus, Flight, Train)

• Budget (in INR)

• Number of Days

• Target: Recommended Destination

# 4. Model Development

AWS SageMaker is used to build and deploy the machine learning model. The dataset is uploaded to an S3 bucket and processed using a Jupyter Notebook instance. The model is trained using a classification algorithm such as Random Forest or XGBoost.

# 5. Deployment & Testing

After training, the model is deployed using SageMaker’s endpoint functionality. The web application sends user input data to this endpoint using an AWS Lambda function, and receives predicted destinations which are then displayed on the website.

# 6. Tools & Technologies

* • AWS SageMaker
* • AWS Lambda
* • AWS S3
* • HTML, CSS, JavaScript for frontend

# 7. Conclusion

The Tourism Advisor provides users with personalized destination suggestions, reducing research time and enhancing the travel planning experience. Future improvements include real-time weather integration and feedback-based model retraining.