# Booking Data Analysis Dashboard

## 1. Introduction

This project is a Booking Data Analysis Dashboard built using Python, Pandas, Matplotlib, Seaborn, and Streamlit. It allows users to analyze booking trends, visualize pricing distributions, and track booking counts over time.

## 2. Features

* Data Cleaning & Preprocessing
* Interactive Visualizations using Seaborn & Matplotlib
* Time-based trend analysis
* Streamlit Web Application for Data Exploration

## 3. Installation & Setup

Prerequisites:

- Python 3.x installed

- Required Python libraries: pandas, matplotlib, seaborn, streamlit, openpyxl

Steps to Set Up:

1. Clone the repository or download the project files.

2. Install required dependencies using the following command:

```pip install pandas matplotlib seaborn streamlit openpyxl```

3. Run the Streamlit application using:

```streamlit run app.py```

## 4. Usage Guide

1. The application provides an interactive dashboard for analyzing booking data.

2. Users can filter by Booking Type and Date Range from the sidebar.

3. Visualizations include:

- Booking Count by Type

- Distribution of Prices

- Bookings Trend Over Time

4. The filtered dataset is displayed at the bottom of the dashboard.

## 6. Future Improvements

* Add more filtering options like facility type and subscription status.
* Improve UI for better user experience.
* Deploy the application on a cloud platform like Heroku or AWS.