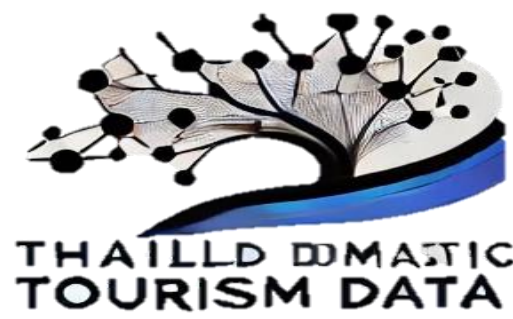# Data Product of Thailand Domestic Tourism

**Objective**
• To present key tourism-related data for decision-making by investors or other stakeholders.
• To develop a platform or tool, such as an easy-to-use dashboard, for analyzing tourism data.

**Data Used:**
Tourism statistics in Thailand from January 2019 to September 2024.

**Data Source:**
Ministry of Tourism and Sports, Thailand.

## Descriptive for Tourism Data

**Overview**
This page presents a comprehensive analysis of tourism performance in selected provinces in Thailand. It leverages advanced AI tools to identify key highlights and trends, supported by interactive data visualizations and boxplots to illustrate data distribution. Strategic recommendations are also provided to enhance tourism experiences, attract more visitors, and optimize the economic impact in these regions.

Select a Province:
Amnat Charoen

### Descriptive Statistics for Amnat Charoen 🔗

| | count | mean | std | min | 25% | 50% | 75% | max |
|---|---|---|---|---|---|---|---|---|
| Occupancy Rate | 69 | 33.3913 | 16.3555 | 0.08 | 26.26 | 33.34 | 40.48 | 66. |
| Tourists in Occupied Rooms | 69 | 5,434.913 | 2,423.4811 | 11 | 4,958 | 5,708 | 6,886 | 10,5 |
| Total Tourists | 69 | 18,099.9275 | 8,623.2335 | 11 | 16,696 | 19,418 | 22,436 | 41,7 |
| Thai Tourists | 69 | 17,777.5942 | 8,441.9721 | 11 | 16,056 | 19,041 | 21,816 | 40,9 |
| Foreign Tourists | 69 | 322.3333 | 291.5046 | 0 | 0 | 400 | 599 | 8 |
| Net Profit (Million baht) | 69 | 26.2536 | 15.0167 | 0.01 | 17.7 | 28.54 | 35.78 | 65. |
| Thai Net Profit (Million baht) | 69 | 25.4626 | 14.4422 | 0.01 | 17.31 | 27.78 | 35.12 | 62. |
| Foreign Net Profit (Million baht) | 69 | 0.791 | 0.9062 | 0 | 0 | 0.7 | 1.08 | 3. |

Fig.1 Table Showing Descriptive Statistics for Selected Province
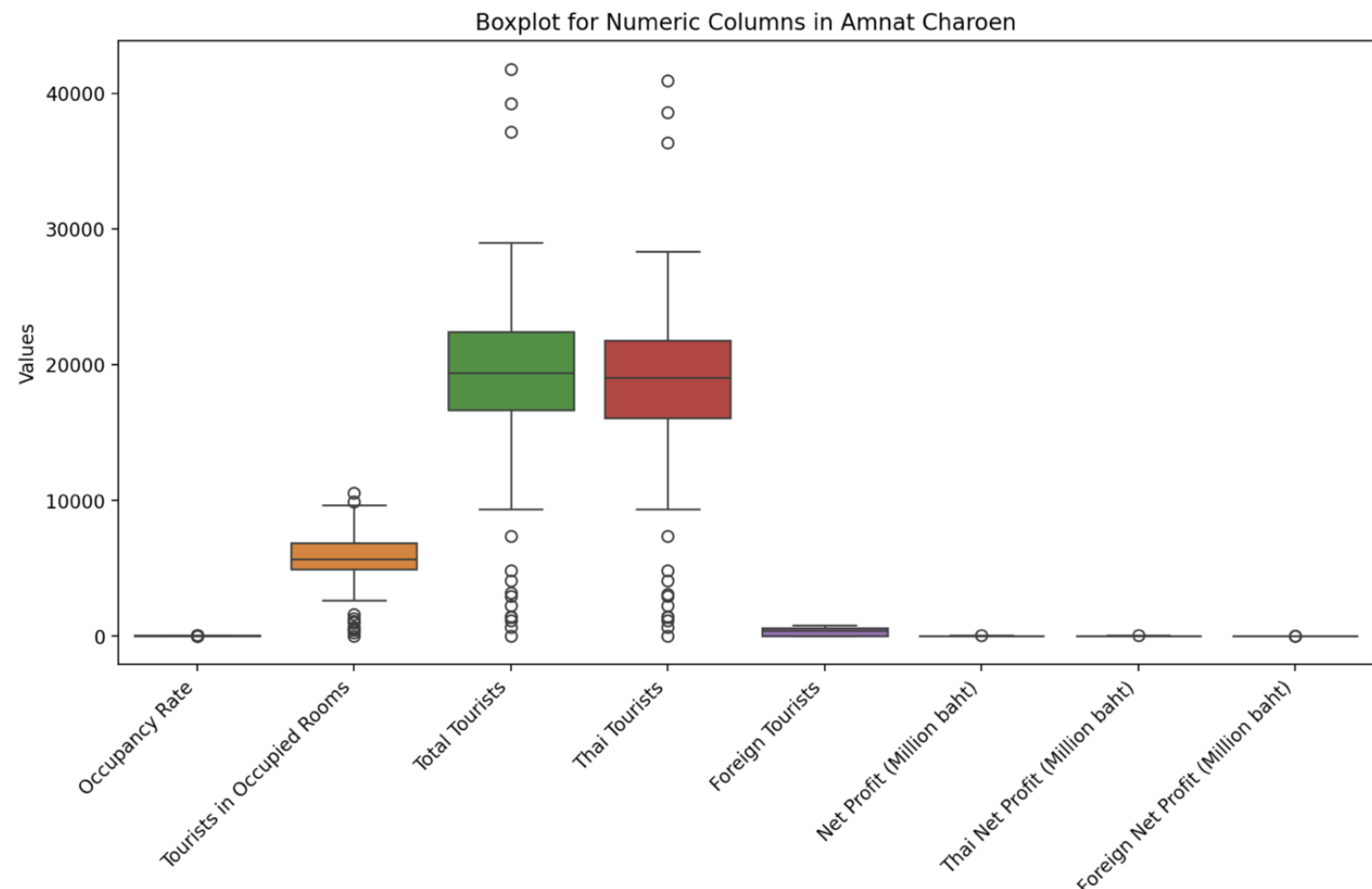
### Boxplot Analysis



Fig 2.Boxplot for Numeric Columns in Selected Province

## Thailand Tourism Heatmap

**Overview**
This page provides an interactive heatmap visualization that showcases tourism performance across various provinces in Thailand. Users can explore tourism trends by selecting specific data columns and years, offering a customizable view of key insights.

Select a column to display on the heatmap:
Occupancy Rate

Select a year:
2019

☑ Include Bangkok Metropolis in calculations

**Heatmap of occupancy_rate in 2019 by Province**



### Chart Explanation

Explain the Chart with Google AI

Fig 3. Example Page Display: Thailand Tourism Heatmap

## Thailand Tourism Trends



**Trend Graphs: Amnat Charoen**
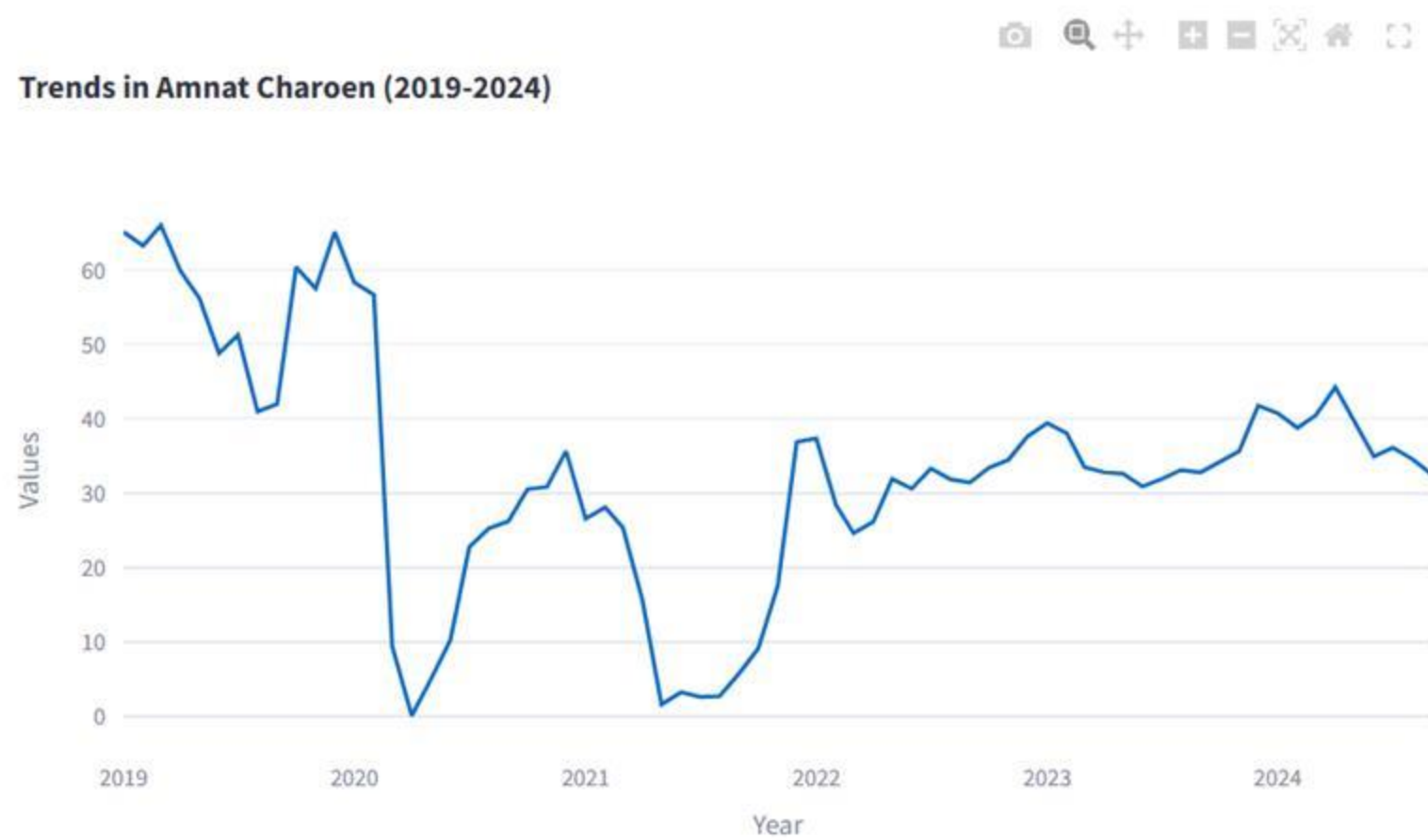
**Trends in Amnat Charoen (2019-2024)**

Fig 4. Trend Graphs of Selected Province

**Overview**
This chart is a comprehensive analysis of trends across various provinces in Thailand.
Users can select a province and a specific metric to explore monthly trends from 2019 to 2024.

The chart dynamically updates to reveal insights into occupancy rates, tourist numbers, and net profits, segmented by Thai and foreign tourists.
Refine your selections using the sidebar to gain valuable and detailed insights.

## Thailand Tourism Forecast

**Overview**
This code is a Streamlit-based application designed for forecasting tourism revenue in Thailand, with support for both local (Thai) and foreign tourist data. It integrates two powerful tools for forecasting: Prophet, a time-series forecasting model, and GeminiAI, a generative AI that can provide additional insights and explanations.
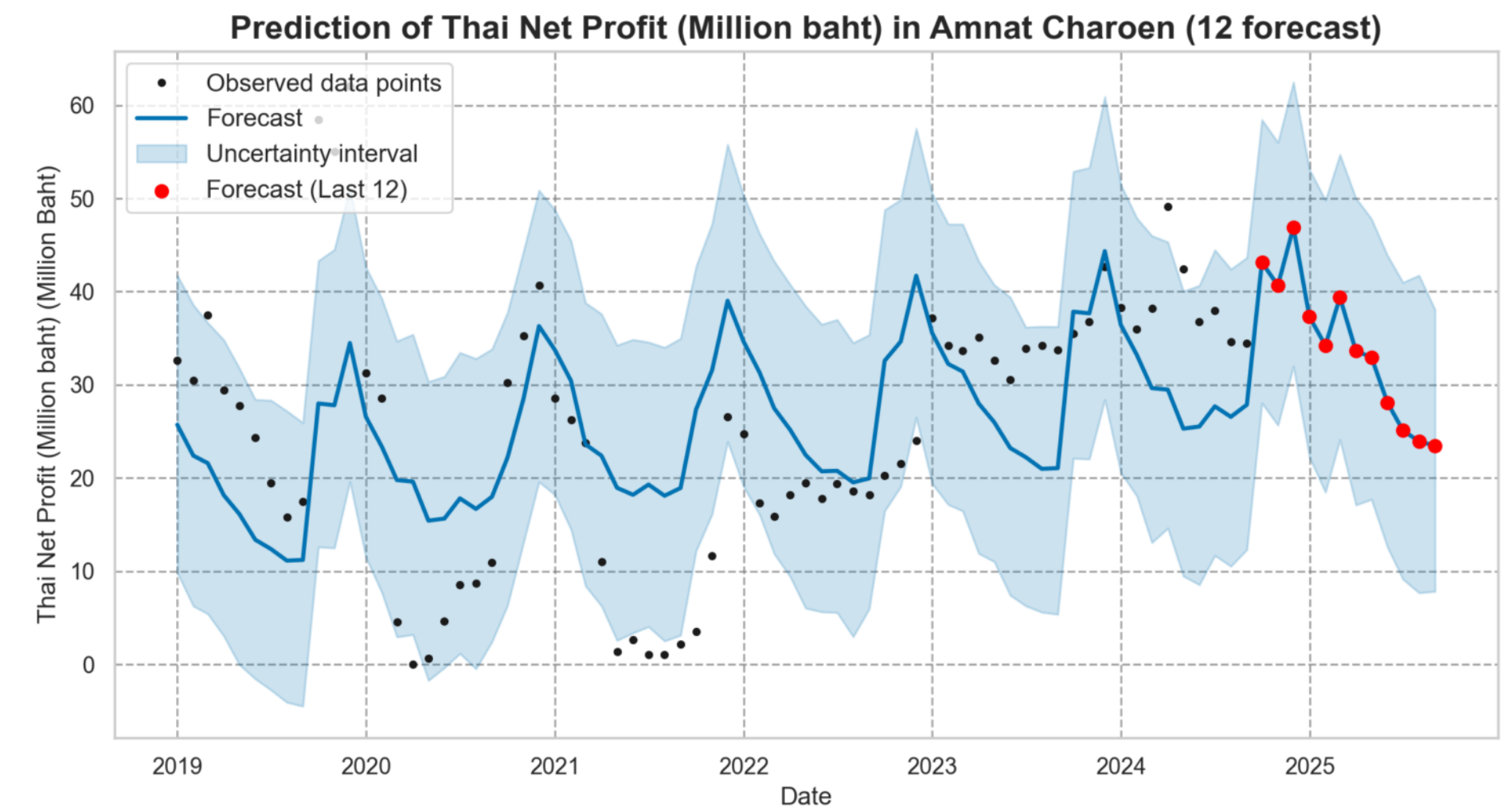


Fig 5. Prediction of Thai Net Profit (Million baht) in Selected Province (12 forecast)

**Graph Explanation**
The graph displayed in the application is a time-series forecast visualization generated by the Prophet model. It provides insights into predicted values of the selected profit type over time for the chosen province.

### References

Ministry of Tourism and Sports, Thailand. (2024). *Tourism statistics in Thailand: January 2019 to September 2024.* Retrieved [January 8, 2025], from [https://www.mots.go.th/mots_en].

Member:
• 6620422006 Varathit Treevalairat
• 6620422017 Thanisorn Phuengcharoen
• 6620422019 Suchanan Yimnarong
• 6620422032 Thiradech Tengwattanachoti