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HAWAI'I TOURISM
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Exploring Tourist Behaviors in Hawaii Using Big Data

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Outline

- Identify tourists from big data

- Analyze tourist behaviors
    - Destination selection
    - Temporal distribution
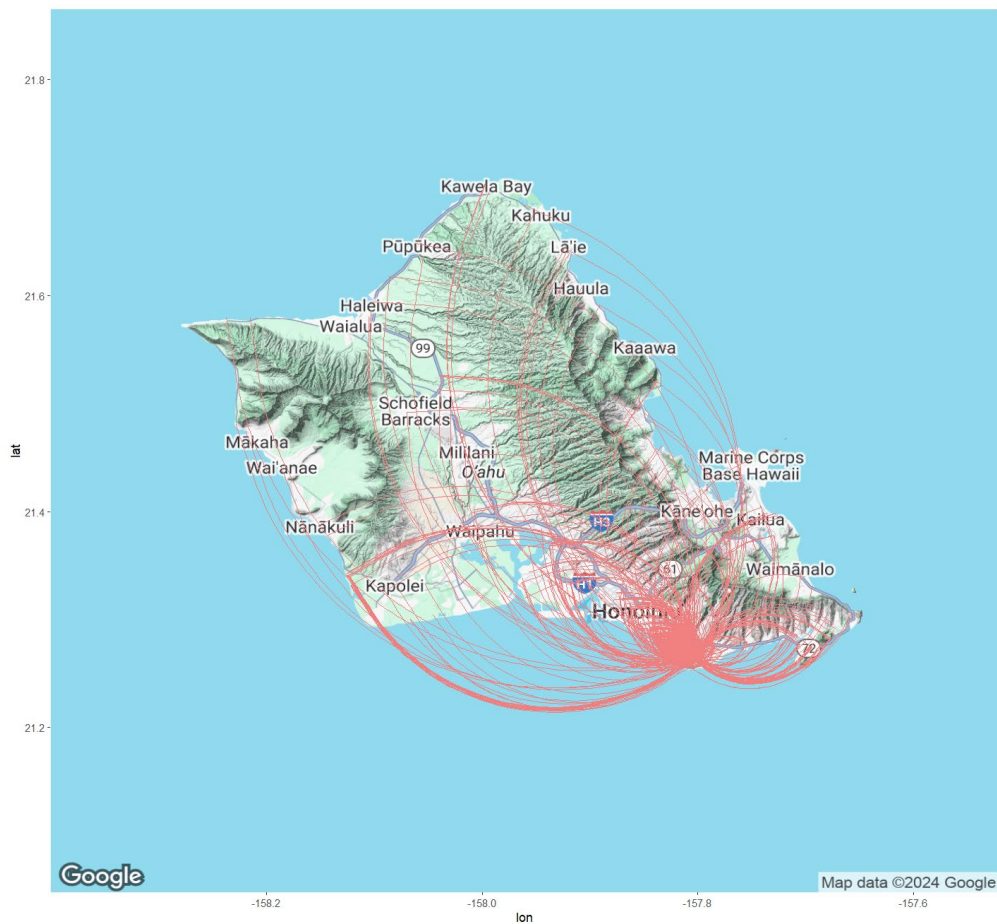   - Attraction-based visiting duration

Vehicle GPS Data

- Data Sources:
  - Collected from connected vehicles
  - Multiple vehicle manufacturers
- Data information
  - Vehicle location (lat and lon)
  - Vehicle speed and movement
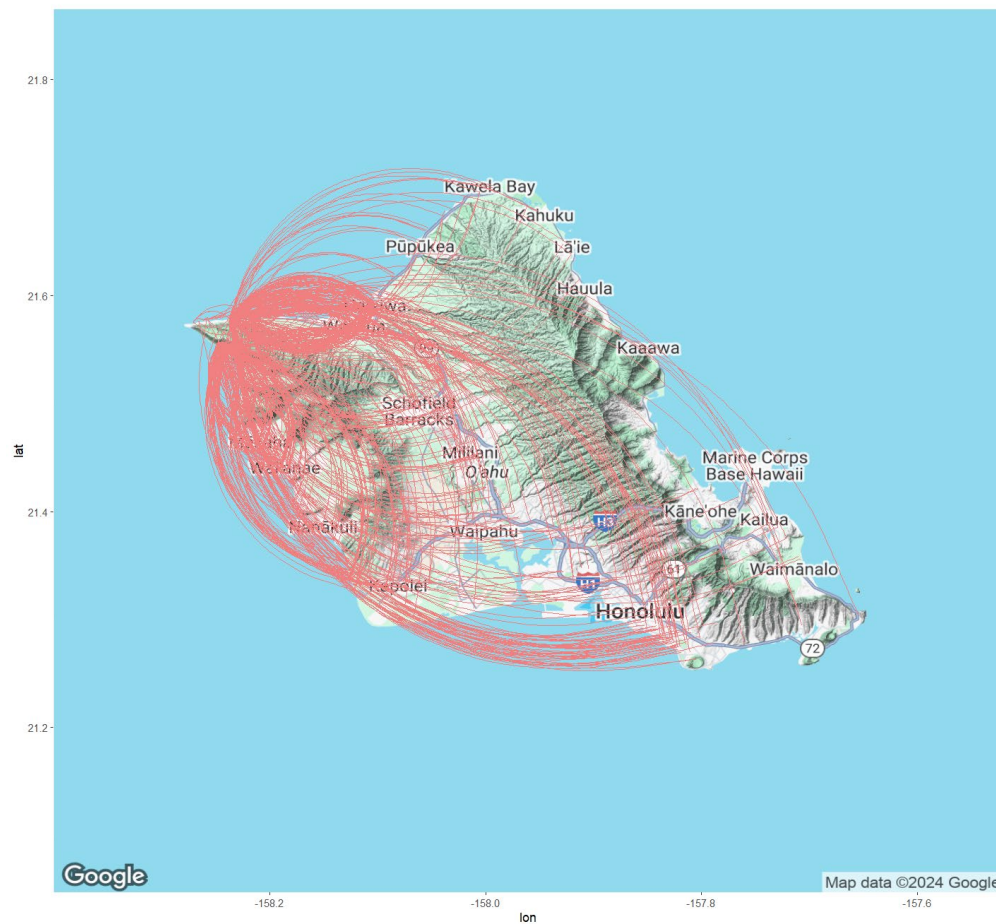 - High resolution – report every 1 to 10 seconds
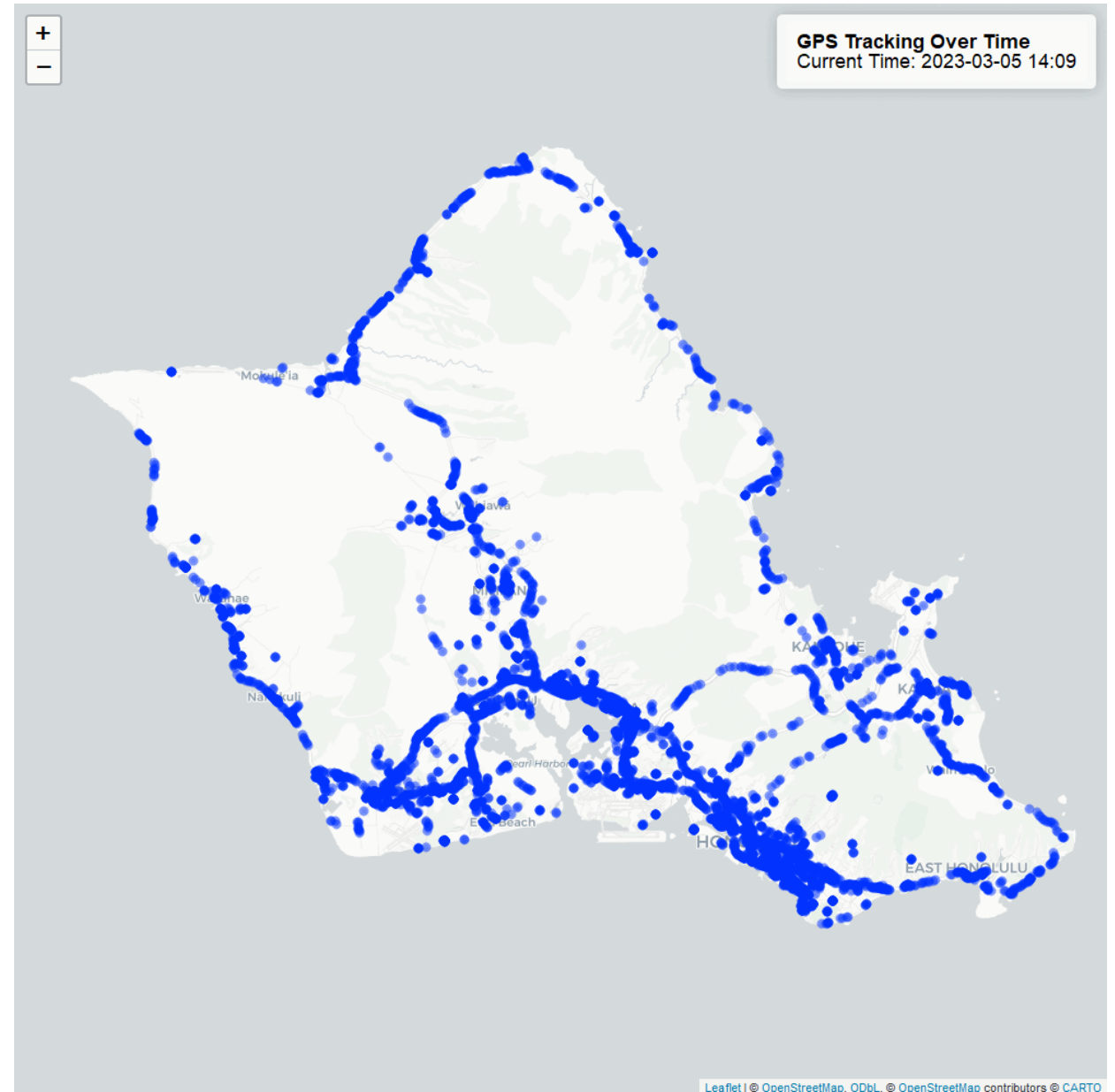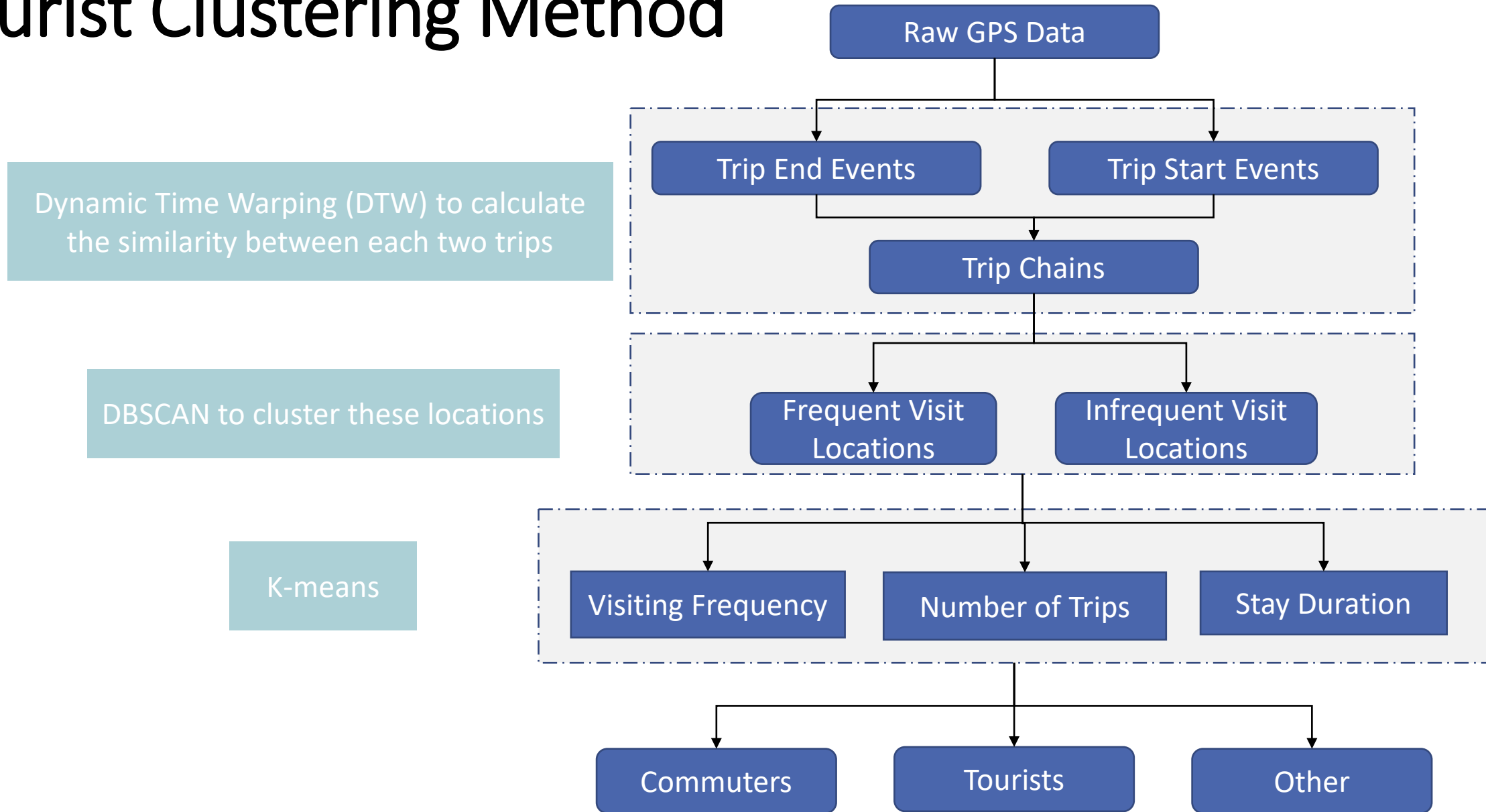
Origin-Destination from GPS Data

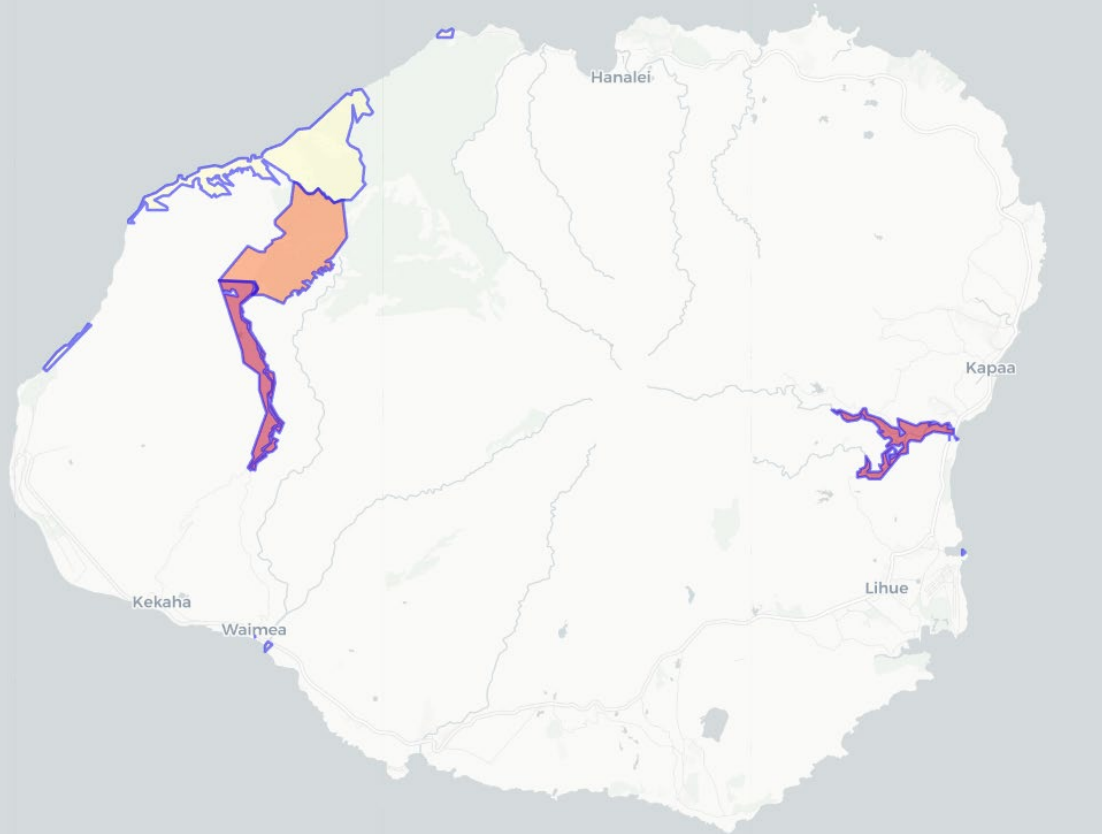Trips to Diamond Head

Trips to Kaena Point State Park

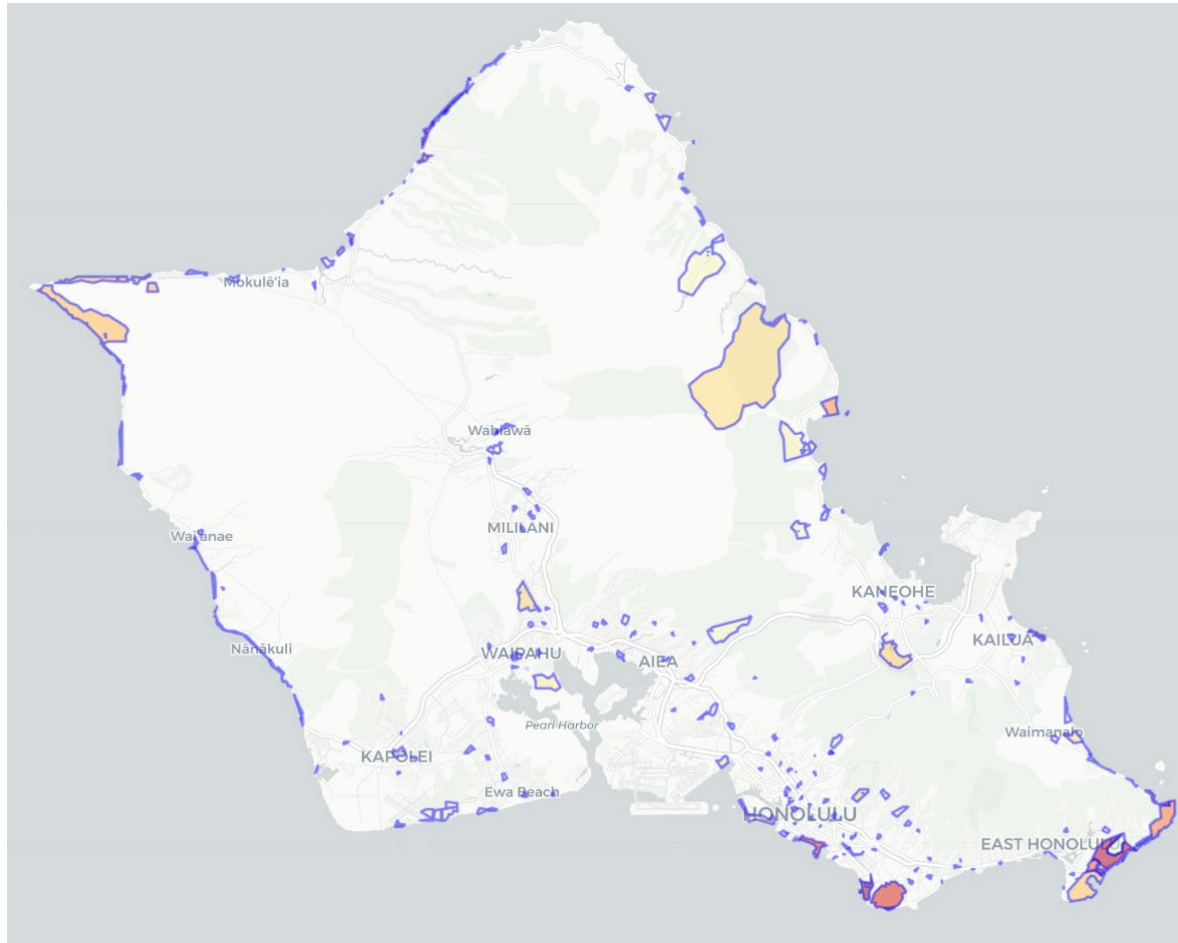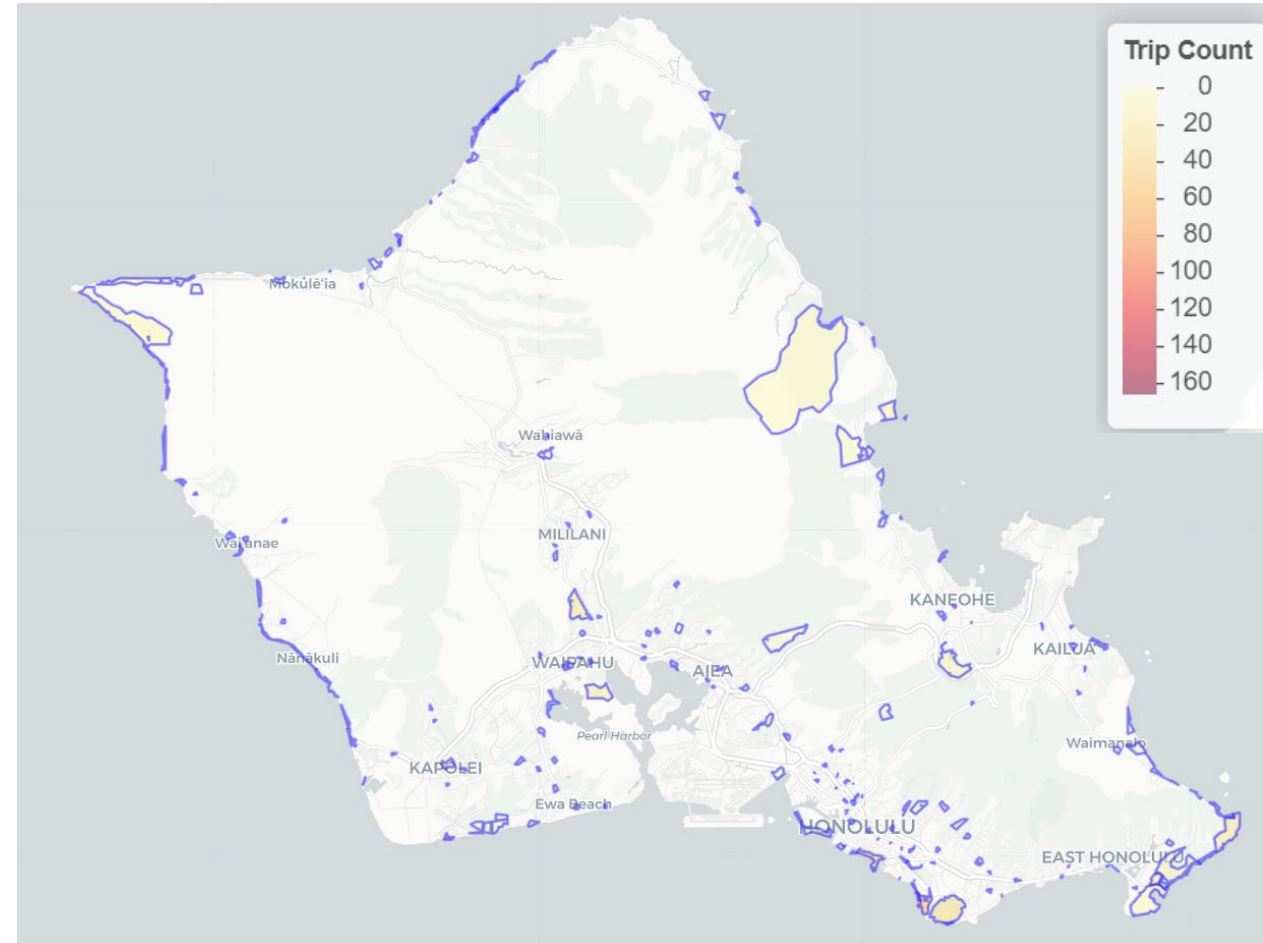# Tourist Clustering Method

Spatial Distribution Analysis

Spatial Distribution Analysis

Attraction Ranking

Tourists

Rank	Attraction
1	WAIMEA CANYON STATE PARK
2	Kapiolani Regional Park
3	Pupukea Beach Park
4	Koko Head Regional Park
5	WAILUA RIVER STATE PARK
6	DIAMOND HEAD STATE MONUMENT
7	HAPUNA BEACH STATE RECREATION AREA
8	Kailua Beach Park
9	KOKEE STATE PARK
10	Ala Moana Regional Park

Number of Trips

Residents

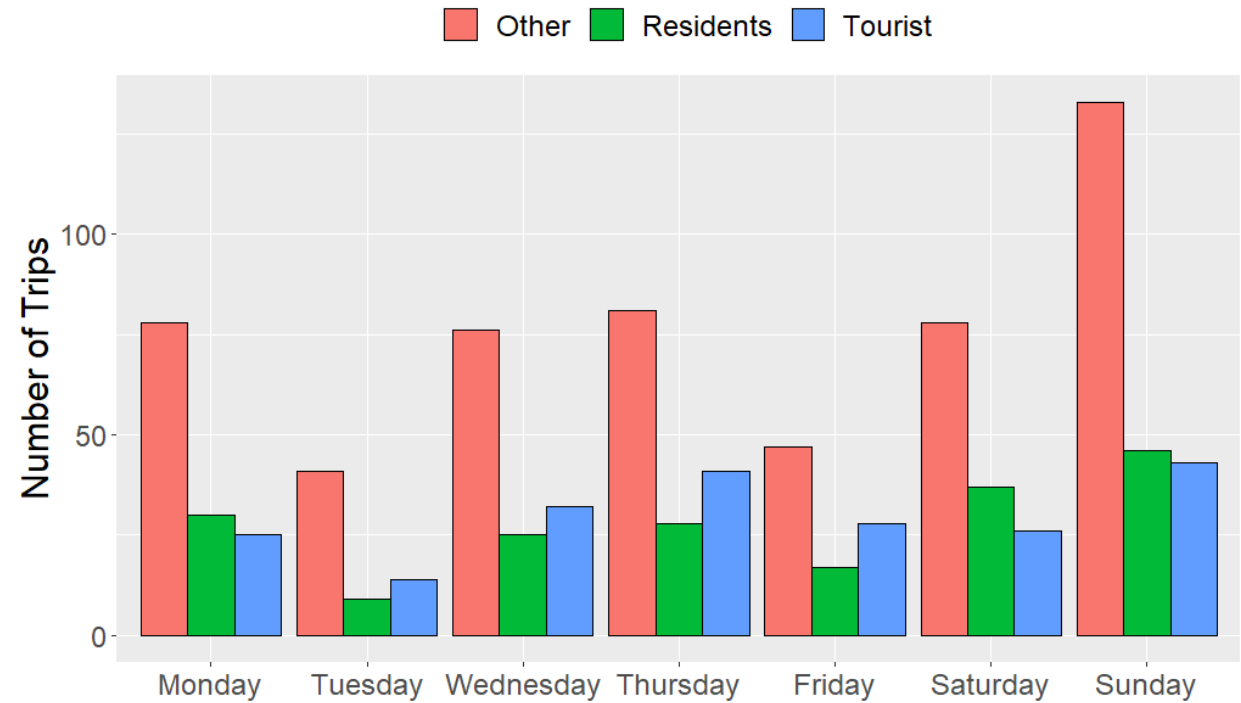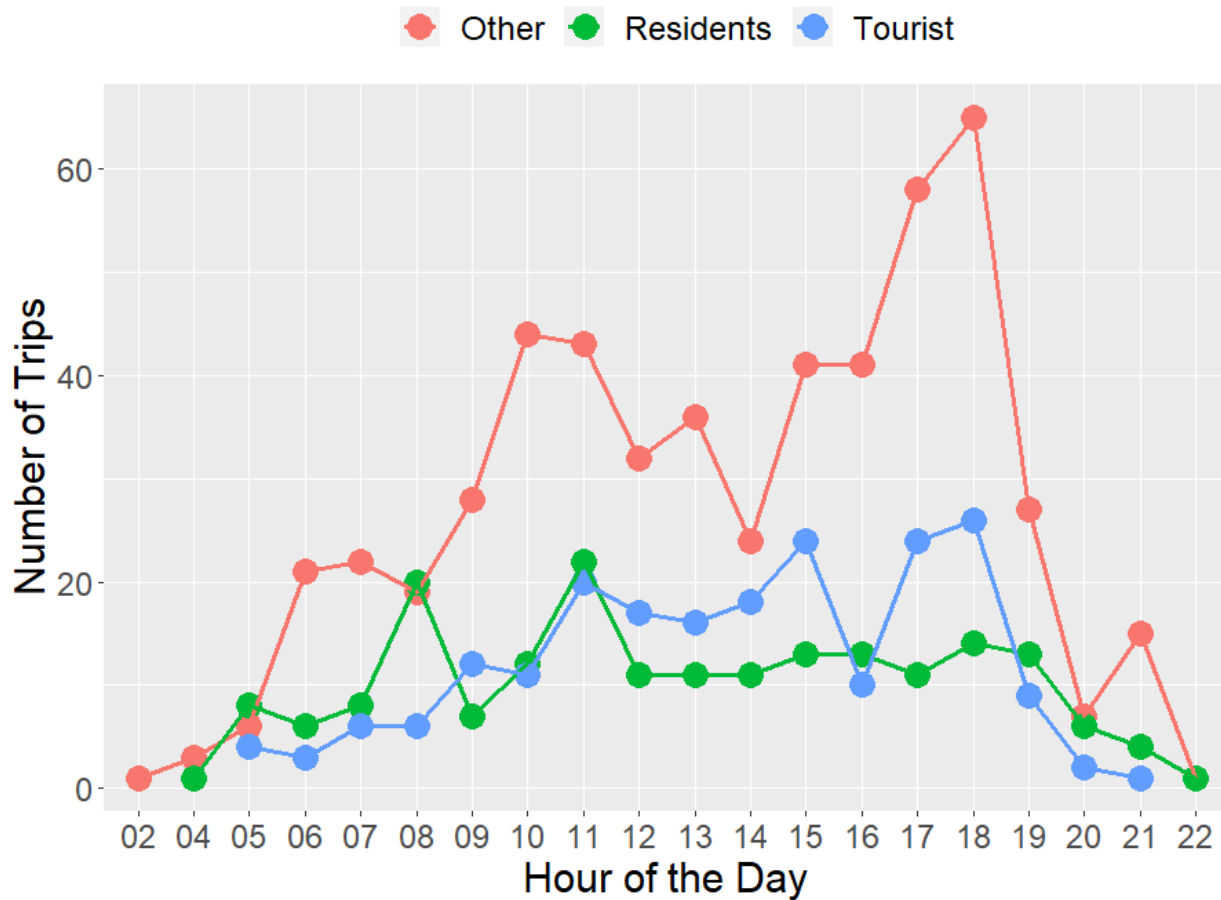| Rank	Attraction
1	Kapiolani Regional Park
2	Ala Moana Regional Park
3	Kailua Beach Park
4	HAPUNA BEACH STATE RECREATION AREA
5	Patsy T. Mink Central Oahu Regional Park
6	Waipio Peninsula Soccer Park
7	Pupukea Beach Park
8	MAKENA STATE PARK
9	DIAMOND HEAD STATE MONUMENT
10	Koko Head District Park

Number of Trips

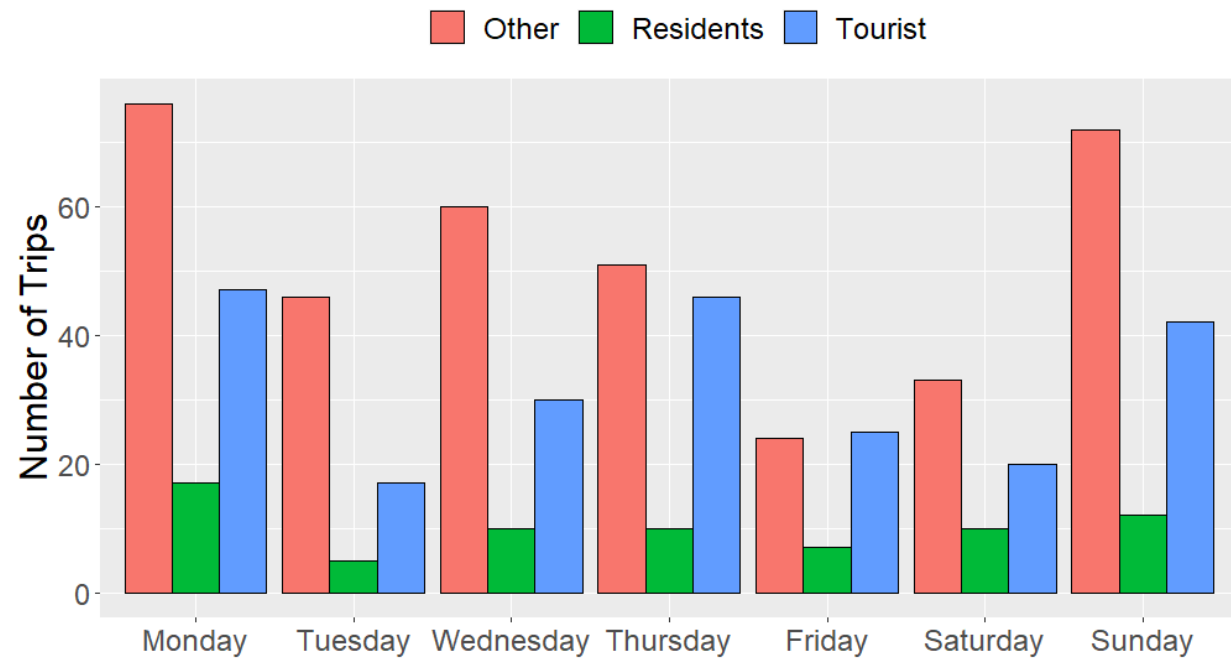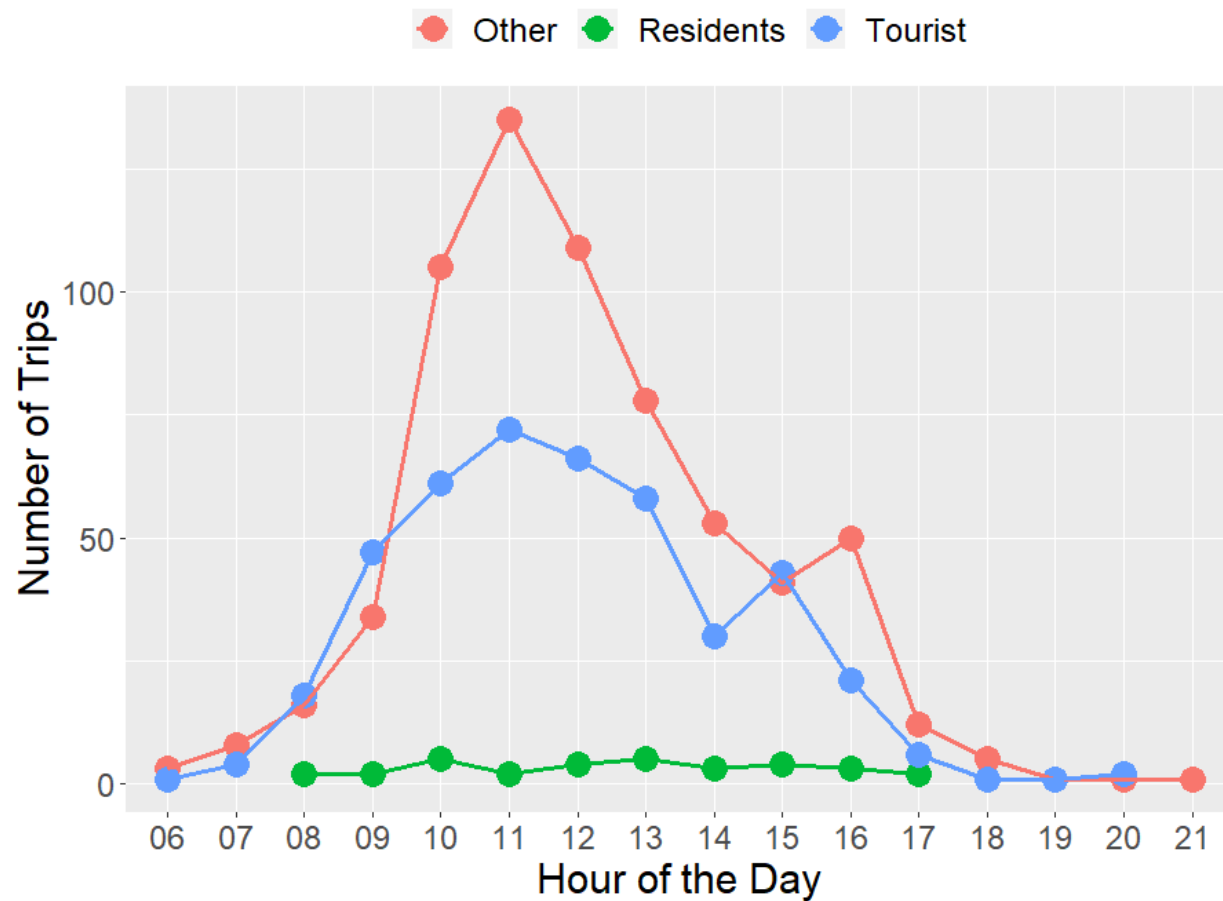# Temporal Distribution Analysis
Ala Moana Regional Park

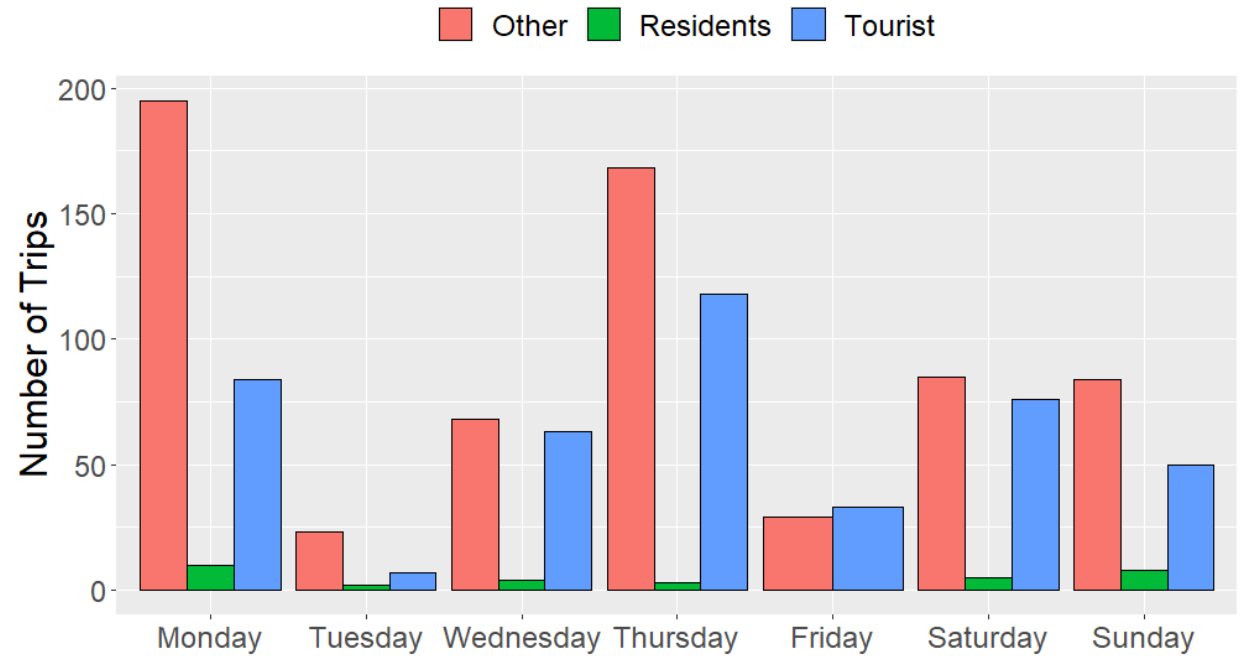# Temporal Distribution Analysis
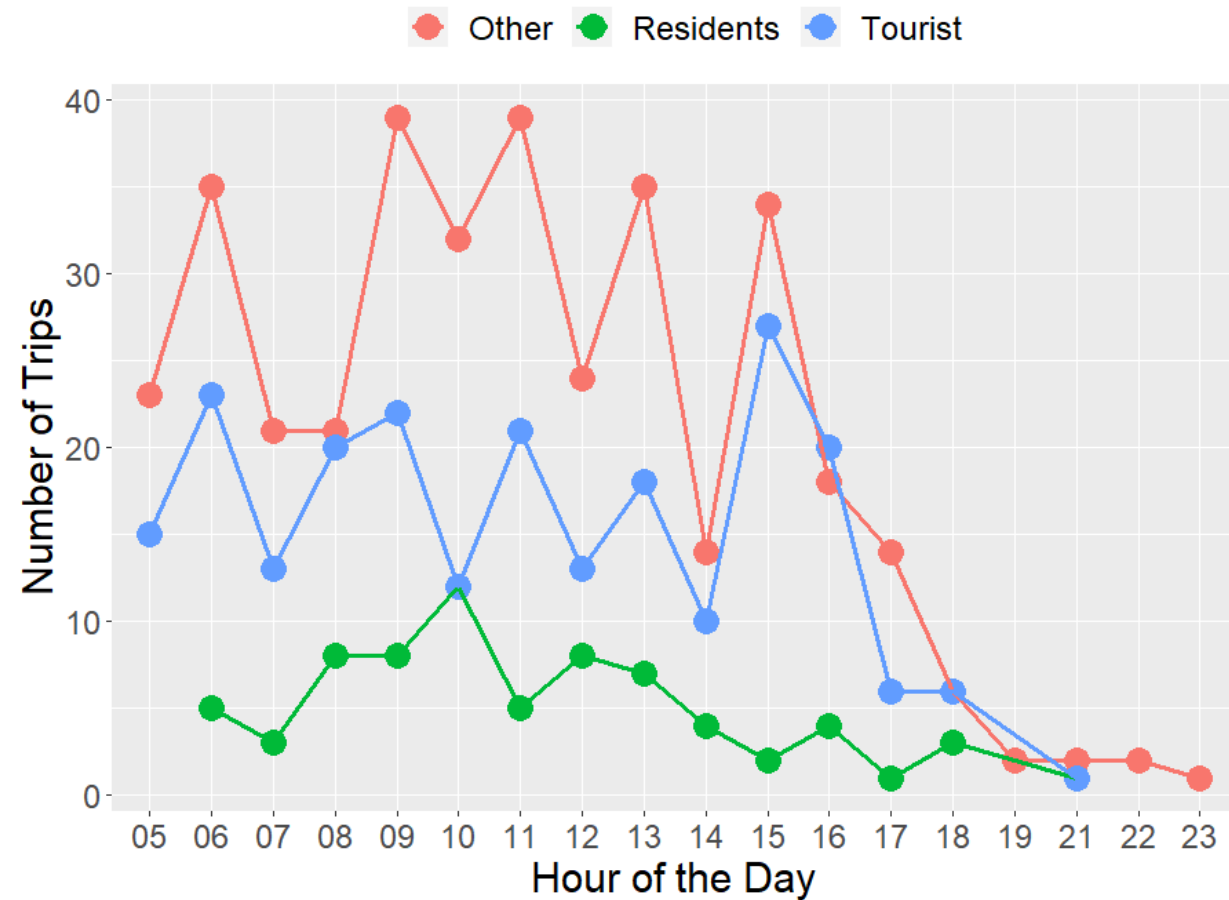## Kailua Beach Park
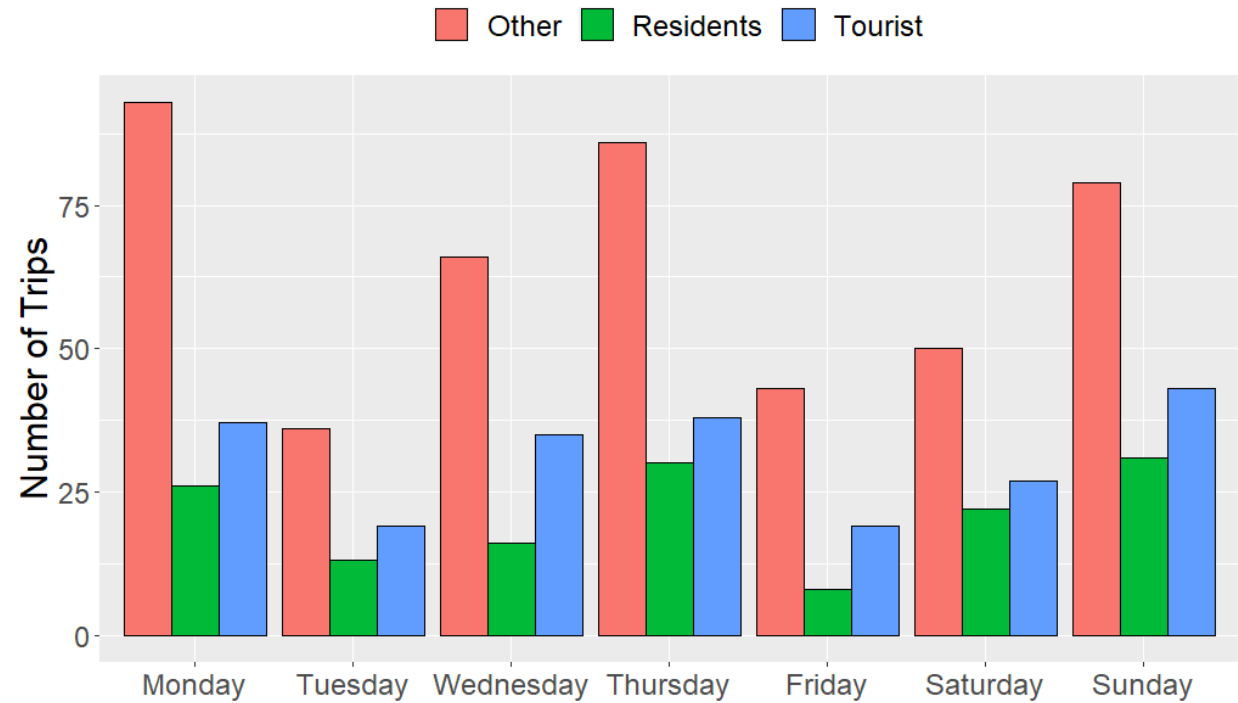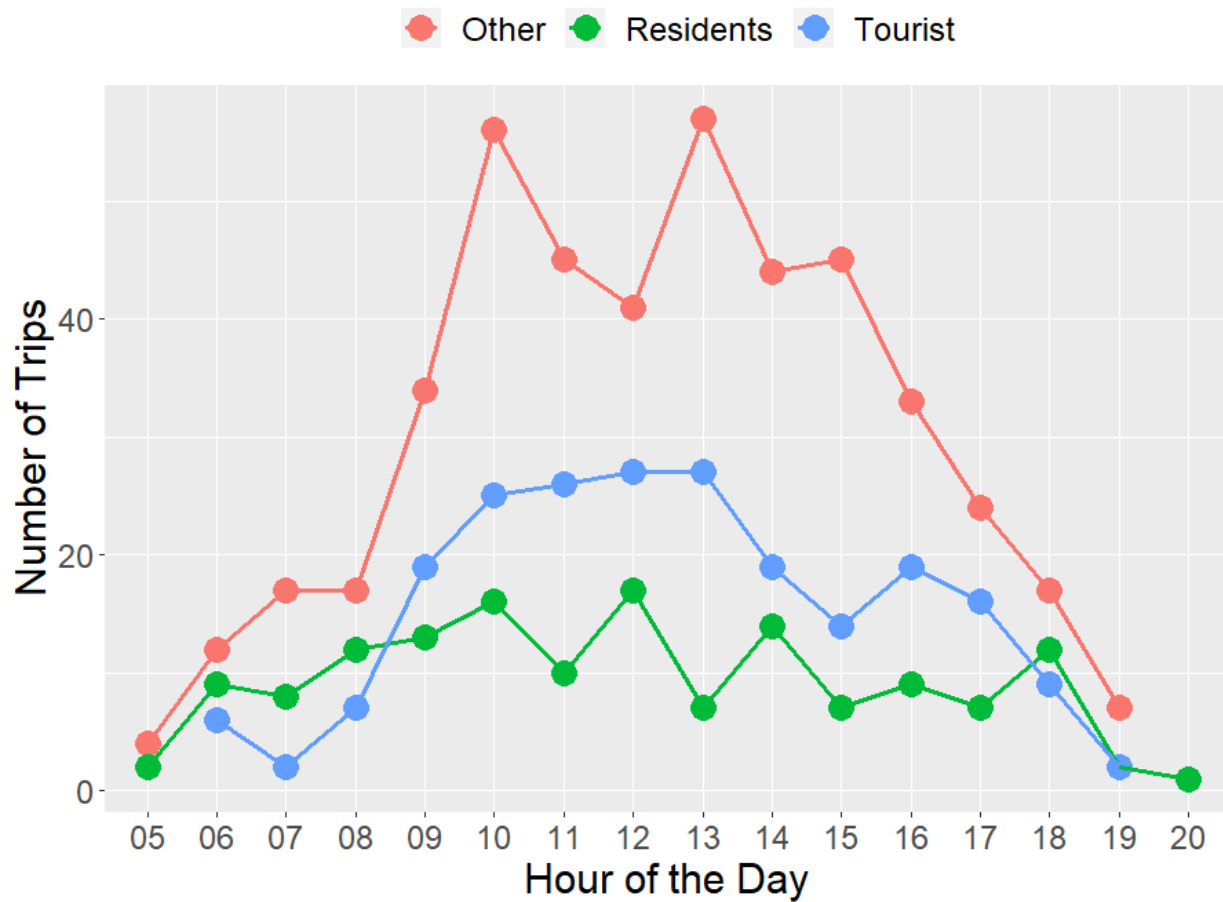
Temporal Distribution Analysis
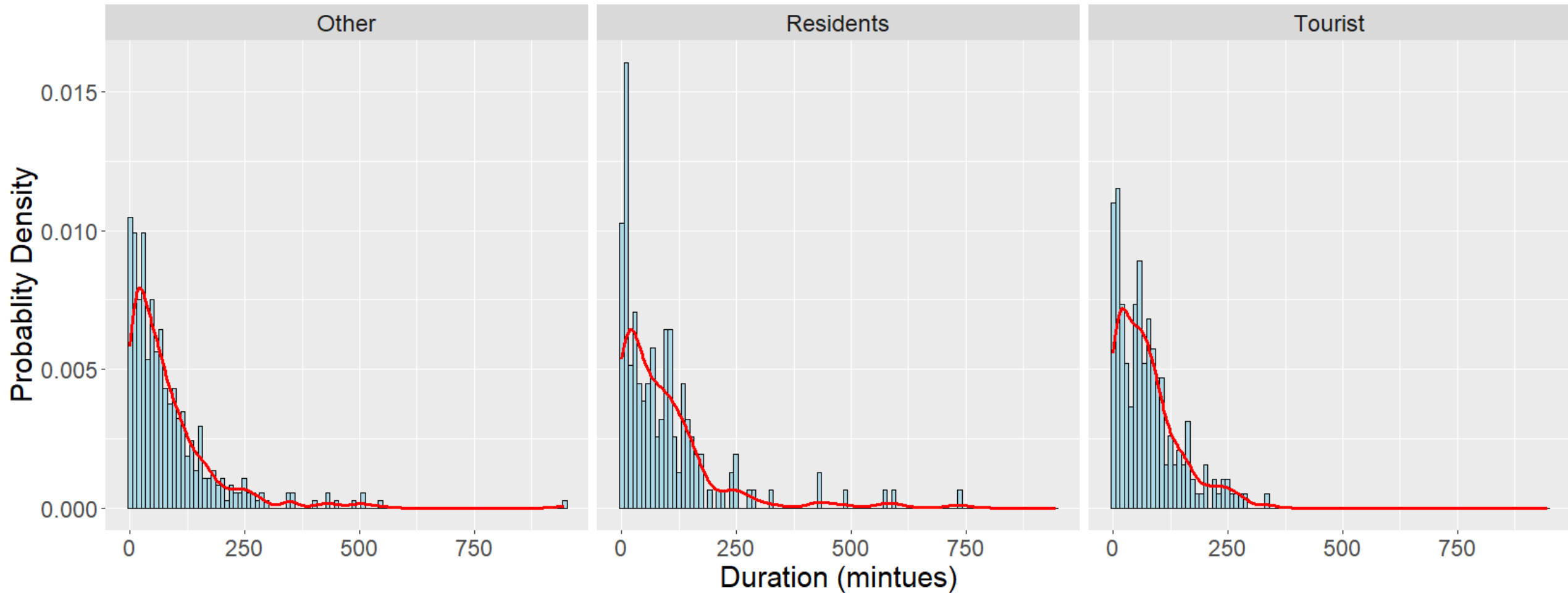## Waimea Canyon State Park

Temporal Distribution Analysis
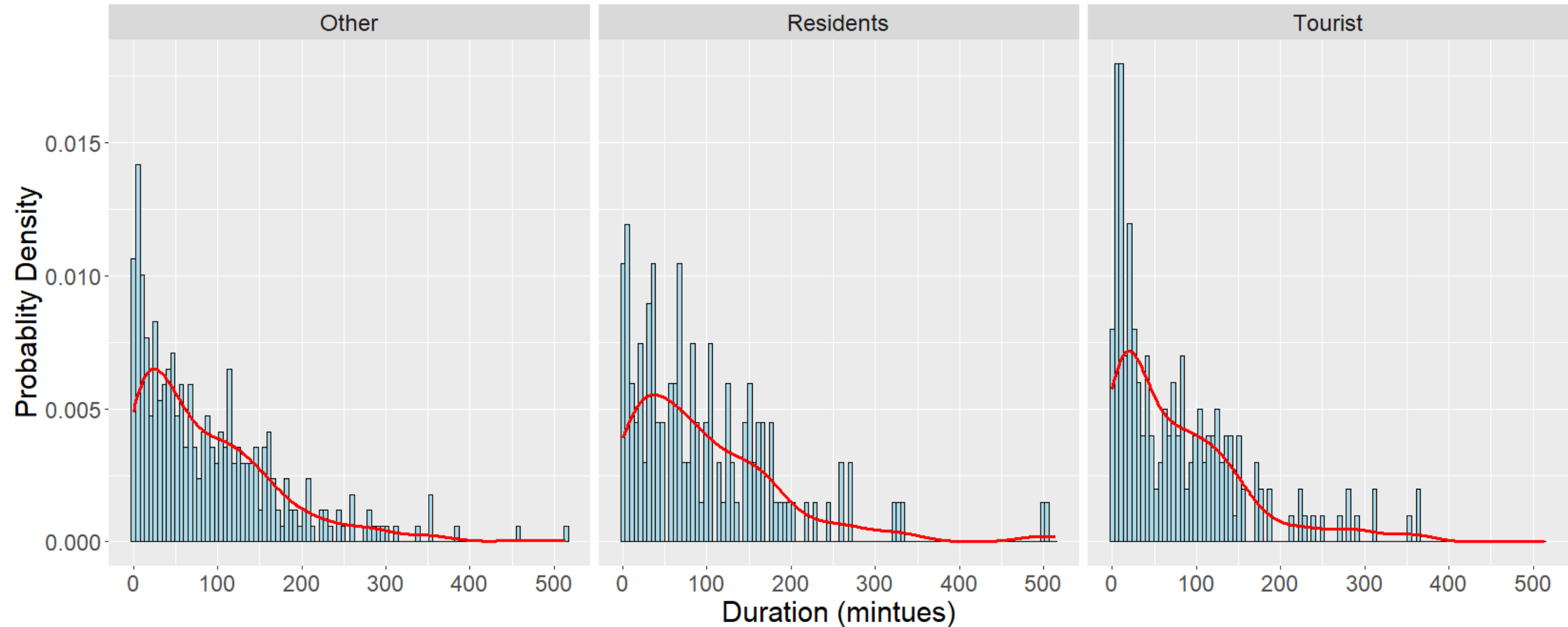## Diamond Head State Monument

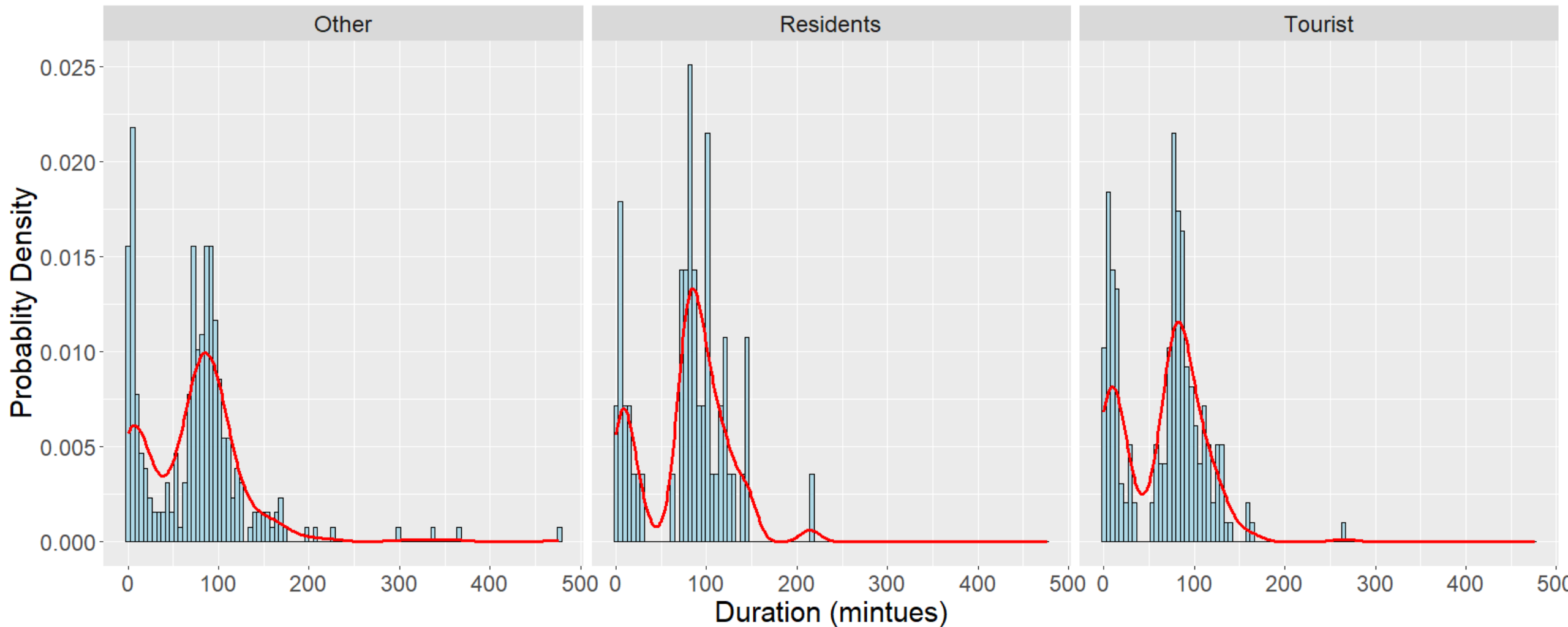# Visiting Duration Analysis
Ala Moana Regional Park

Visiting Duration Analysis
Kailua Beach Park

Visiting Duration Analysis
Diamond Head State Monument

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Thank you! Questions?