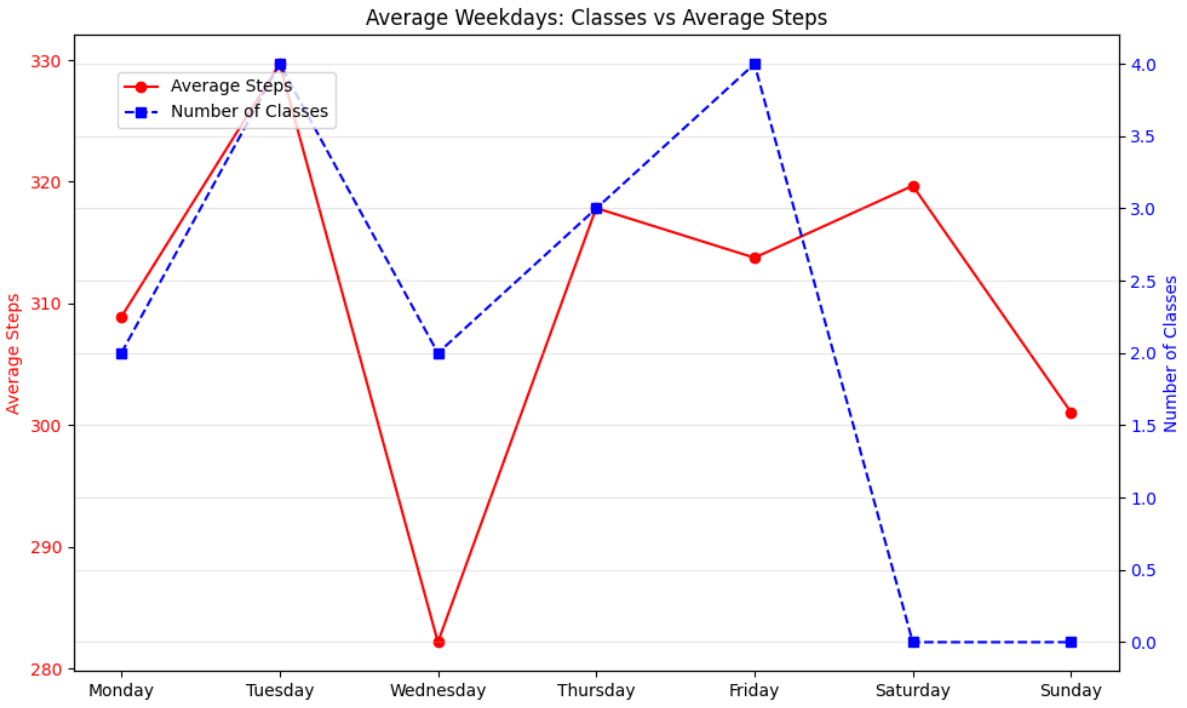
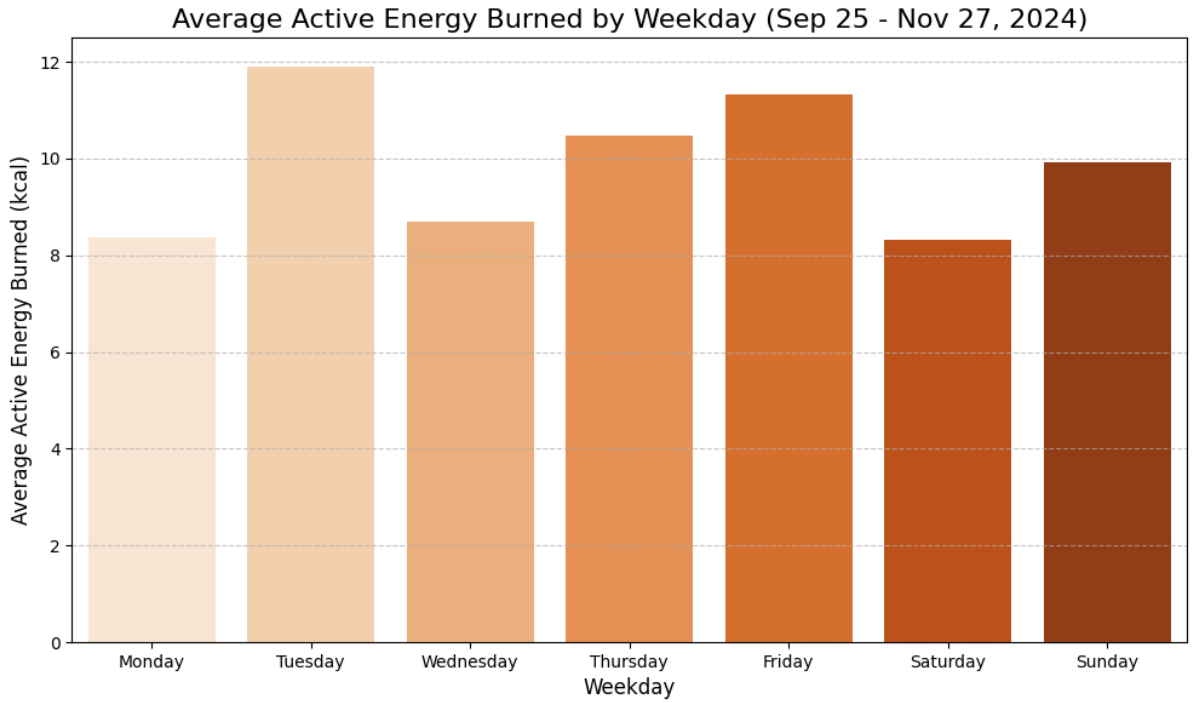
1. Steps and Class Schedule (Line Plot)



- **Observation**:
  - There is a direct relationship between the number of classes and the average steps taken. For instance:
    - On **Tuesday** and **Friday**, when the number of classes peaks, the average steps remain relatively high, suggesting possible walking between multiple classes or buildings.
    - **Wednesday**, with fewer classes, shows a steep decline in average steps, indicating a day with limited movement.
    - The weekend (Saturday and Sunday) exhibits minimal activity in terms of classes but demonstrates a steady increase in steps, likely reflecting time spent on recreational activities or personal tasks.
- **Key Findings**:
  - Academic workload on lecture days can drive physical activity if multiple classes involve walking between locations, but when fewer classes are present, movement is significantly reduced.
  - Weekends offer greater opportunities for unstructured physical activity, leading to increased step counts compared to weekdays.

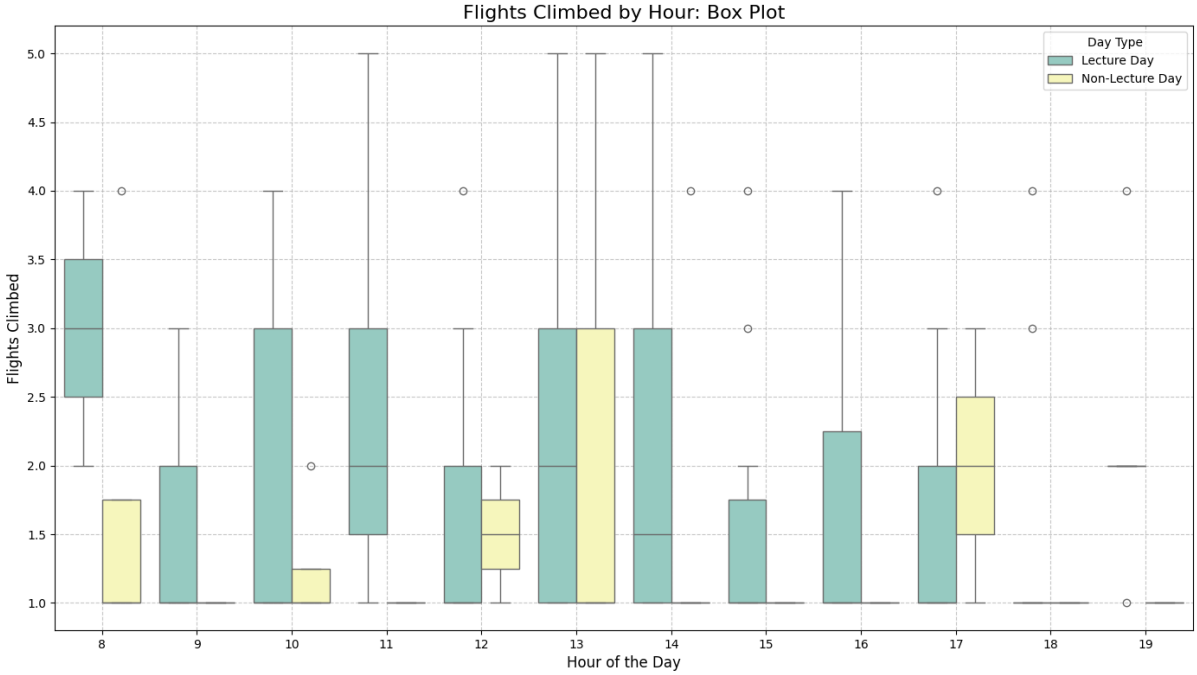
2. Active Energy Burned by Weekday (Bar Chart)



- **Observation**:
  - Active energy expenditure is **highest on Friday**, which may result from the combination of lecture times and post-class activities.
  - Energy expenditure is **moderate on weekdays** (Monday through Thursday), with a slight increase on non-lecture-heavy days.
  - The **weekend (Saturday and Sunday)** sees a similar pattern, with increased energy expenditure, indicating higher physical engagement likely associated with leisure or sports activities.

- **Key Findings**:
  - Structured days with lectures contribute to a consistent baseline of energy burned, but the peaks on Fridays and weekends reveal a shift toward more dynamic and voluntary physical activities outside of academic commitments.
  - Students may rely on weekends to compensate for lower activity levels during lecture-heavy weekdays.

3.Flights Climbed by Hour and Day Type (Box Plot)



- **Observation**:
  - **Lecture Days**:
    - Flights climbed are more consistent during lecture hours (8:00–19:00), with the majority of activity occurring around **mid-morning (10:00)** and **mid-afternoon (15:00)**, likely during breaks between classes.
    - Variability is lower on lecture days, reflecting the structured nature of academic schedules.
  - **Non-Lecture Days**:
    - There is greater variability in flights climbed, with notable peaks around **lunchtime (13:00)** and early evening (17:00).Possibly, when I went home.
    - The lack of structure on non-lecture days allows for more spontaneous or intense stair-climbing activities.

- **Key Findings**:
  - Lecture days encourage moderate but consistent stair activity, likely associated with class transitions or commutes.
  - Non-lecture days offer opportunities for increased and irregular activity, emphasizing the flexibility and unpredictability of physical movement on these days.

Conclusion

This analysis reveals the profound impact of academic schedules on physical activity patterns. While lecture days provide consistent but moderate activity, non-lecture days allow for more variability and flexibility, often leading to increased activity levels. Key insights include:

1. **Steps and Flights Climbed**:
    - Lecture days contribute to structured physical movement, primarily influenced by class transitions.
    - Non-lecture days exhibit higher variability, with peak activity during leisure hours.
2. **Active Energy**:
    - Energy expenditure aligns with academic schedules, peaking during lighter workloads (e.g., Fridays) and weekends, highlighting the role of unstructured time in fostering physical activity.
3. **Balancing Work and Movement**:
    - Students can enhance their physical activity on lecture days by incorporating brief walks or exercise between classes.
    - Weekends and non-lecture days provide an ideal opportunity to compensate for the sedentary nature of lecture days, ensuring a balanced routine.

By understanding these patterns, students can make informed decisions to maintain a healthy balance between academic responsibilities and physical well-being. This analysis serves as a step toward promoting healthier habits during university life.