Jazzmin Duncan
Captone in Data Science

Topic

For the duration of my Capstone project, I will work with Professor Joti Rockwell and Concert Production Manager Audrey Dunne to explore the factors that influence student attendance at concerts hosted by the music department, utilizing a combination of historical data and hands-on collection. I've divided the project into three sections: Past, Present, and Future, to flesh out the research questions fully in the context of how they'll impact the goals of the music department, and considering the resources necessary for each section.

I will analyze 15 years of past concert attendance logs to identify patterns over time, including how events such as COVID-19 affected participation, how changes in the student body affected attendance, and how different events on campus limit student availability. To connect these trends to broader campus life, I'll incorporate data on student demographics, academic calendars, and other campus events, which may impact whether students choose to attend. I'm also looking at how different types of concerts -- such as student performances, faculty recitals, or guest artist events -- draw different audiences.

In the present phase of the project, I am collecting new data through student surveys and social media analytics. I'll be downloading the .csv files from Facebook, Instagram, Google Dashboard, and Bitly, and visualizing the relationship between digital and in-person engagement.

For the future phase of the project, I aim to utilize insights from both historical data analysis and present-day data collection to develop reproducible strategies that can improve and predict concert attendance moving forward. To support this, I will examine how different types of post-concert feedback (e.g., surveys, short responses, rating scales) can be used to collect ongoing, qualitative insights into students' experiences, which can then be used to improve programming and outreach. In addition, I hope to expand the dataset by identifying new variables that could be tracked in the long term—such as whether students are music majors, how often they attend campus events in general, or their engagement with music outside of class. Ideally, the project will culminate in the creation of a predictive model that estimates attendance for future concerts based on known factors like historical trends, social media engagement metrics, and the timing of other campus activities.

See research questions below.

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Past

Analysis of [data (attendance logs for concerts)](#) collected over the past 15 years.

Research Questions

- How did COVID-19 impact concert attendance?
- Do different concert types (classical, contemporary, student vs. faculty performances) show distinct attendance patterns?
- How did changes in student body composition (size, demographics, academic programs) relate to attendance patterns?
    - I can probably find student body data online or get from ASPC
- How do other campus activities (including academic) impact attendance?

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Present

Collecting new data via social media and surveys.
[Instagram](#) | [Bitly](#) | [Google dashboard](#) | Facebook (idk if I got invite link)

Research Questions

Survey/Data Collection

- What entices students, specifically, to attend a concert?
  - Known factor: their friend is playing in the concert! If that's not relevant, e.g. faculty or guest performances, what other factors contribute to their interest?
- What are the primary barriers preventing interested students from attending? (time, location, awareness, perceived relevance)
  - All events in the past on Engage/Pomona calendar
- How students perceive concert experience as part of their curriculm?
- What did you learn from/like about the concert?
- Experience on a scale from 1-10?

Social Media Analytics

- What posts generate the most engagement, and how does this translate to attendance? Why?
- What is the optimal timing and frequency for concert promotion posts? Does this vary per platform?
- How does the visual content type (flyers, stills, behind-the-scenes content) affect engagement rates?
- What role do student vs. official account endorsements play in driving attendance?

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Future

Brainstorming ways to drive engagement based on data.

Research Questions

- How can we get newcomers to concerts?
- How can we get first-time attendees to return to another concert?
- What columns can we add to the dataset to acquire more information in the future?
- What post-concert feedback mechanisms would provide actionable insights?
- Can we develop models to predict attendance based on historical patterns, social media engagement, and campus factors?