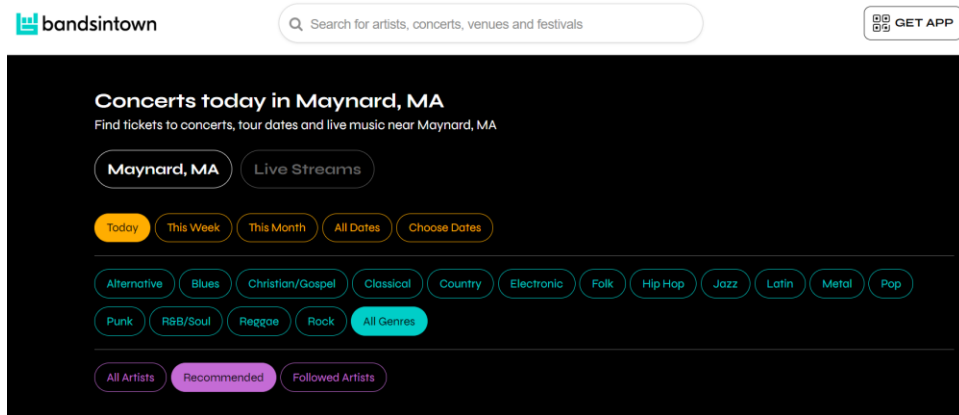


# Sean McLean

## ITC 6000

### Final Project

# BandsInTown Platform



### Introduction

In the realm of live music experiences, the music platform BandsInTown stands as a beacon, connecting music enthusiasts with their favorite artists and revolutionizing the way music fans discover and attend concerts. The focus is to look at the features

the platform provides for the user and how the recommendation systems can better personalize search histories that lead to the best possible concerts, artists, venues, and other events in the area. This business challenge can be achieved by analyzing the tracking system requirements for the user and based off that model build a one-stop experience for discovering shows and buying concert tickets.

### **Primary Use Cases:**

- Follow artists - Staying informed about bands tour dates, new albums, etc.
- Music recommendations - Follow certain artists, venues, festivals, and genres of music and be directed to other bands or styles of music that the platform may believe the user would like.
- Upcoming Tour Dates - Provide local information in user profiles and be notified when a following artist on the app is going to perform live in their location.
- Ticket Information - Links offered on the app or website to upcoming shows and to venues where the user can buy tickets.

The app and website are free to use, and most purchases would be from links to outside vendors like Ticketmaster or Spotify. One feature provided is BandsInTown PLUS, a subscription service offered by the platform, entailing a monthly membership fee for exclusive access to live music streaming performances (BandsInTown, 2024). The app is the best way to find out about my favorite bands when they are touring near me in Boston. It is also a great opportunity to discover new bands I haven't heard of but are like other bands I listen to.

### **Business Analysis**

Research of the platform reveals that there are three major user types:

- **Music Streamers:** BandsInTown allows users with a registered profile to sync up their music streaming accounts. This option for connecting platforms is also available on the app. The four streaming providers offered for sync are Spotify, Apple Music, Amazon Music, and Facebook. The live streaming music

subscription through the platform can be accessed via paid monthly subscription (BandsInTown, 2024).

- **Concert Goers:** After registering the user can build a personal account by following their favorite artists, venues, genres, and events and setting up its geographic location. A radius is generated to inform the user of concerts in their city or area and other notifications of importance based off their user settings and history. Tickets can then be purchased through links from the following artists and venues that direct the user to vendors like Live Nation (BandsInTown, 2024).
- **Artist Followers:** Users select their favorite artists and bands and can view their personal pages on the website. A fan can then look at tour information, reviews from other users of the following band, and view artist photos. Links to streaming services, ticket vendors, and band merchandise are also prevalent on the artist's pages (BandsInTown, 2024).

#### **Business Rules that the app employs:**

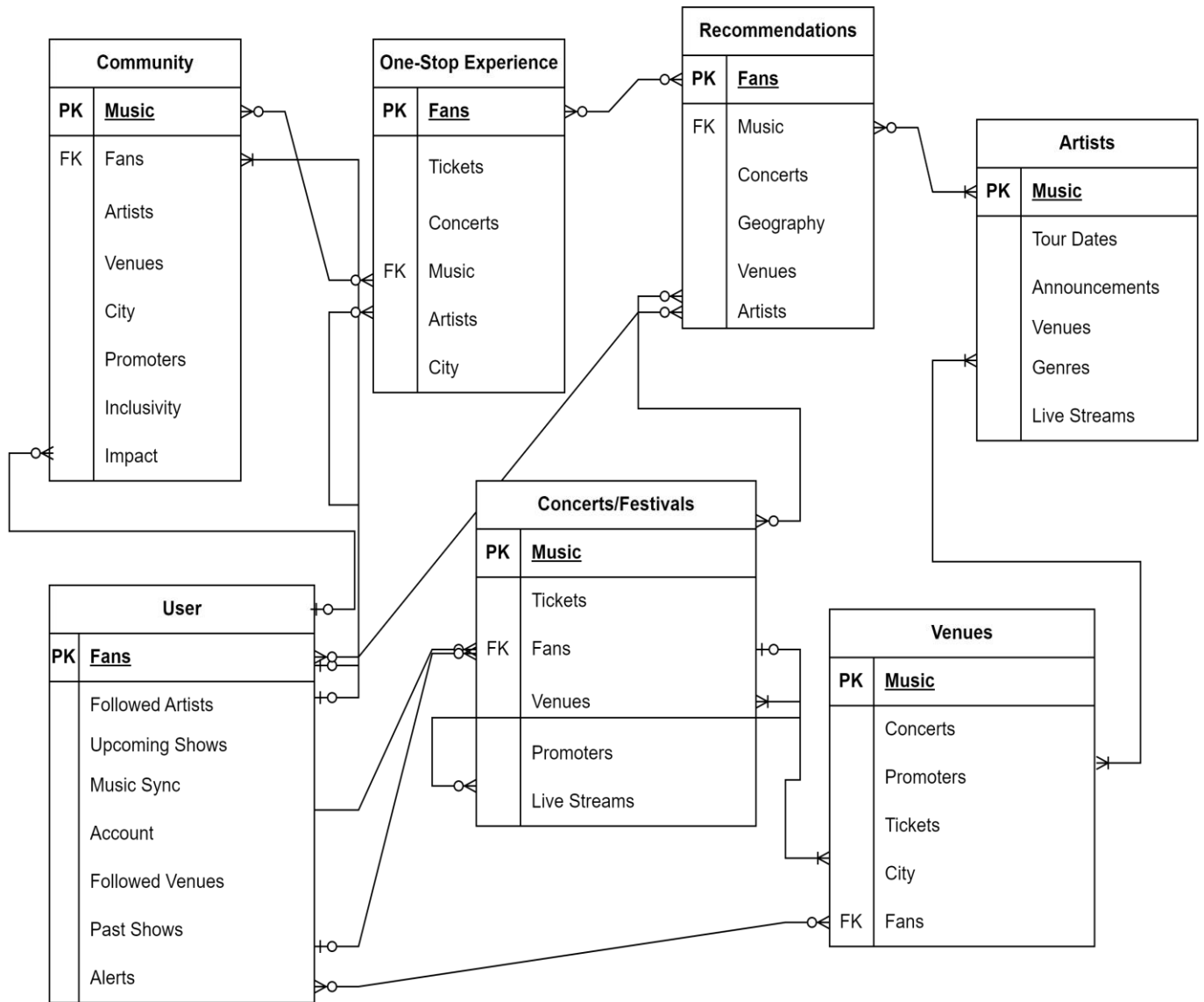
- **Required User Account:** Users must create an account to follow their favorite bands, venues, and festivals to be eligible for the services the platform will provide to them.
- **User Experience:** Users can then build a one-stop user experience where they can stay up to date on their favorite artists, when live shows are happening in their city, and how to buy tickets on the platform.
- **Recommendation Systems:** Recommendation systems are built based off the users' selected bands, festivals, and venues and offer them on the website or app the best possible suggestions for artists, venues, genres, new artists, and festivals.
- **Geographic Awareness:** Venues, shows, and events within the user's geographic range are established based off the user profile and make it more convenient when seeking concert tickets in the foreseeable future.
- **Community Values:** Ensure and maintain that the company has a sense of community with the artists it supports, the fans that support the artists, and the venues they promote on a national scale.

- **Inclusivity:** The platform must promote and honor inclusivity in the music scene and culture and ban discrimination and racism of any kind on the platform.

### **Table Design and Analysis**

The data is structured to center the entity user who begins this journey on the platform by setting up an account. This entails personal information and then creating the music profile of artists, genres, and venues to follow. Over time if the user attends concerts and plans to attend some in the future, this type of history is also stored in the user table. The user can also adjust his notifications, so they receive alerts that pertain to their created music profile. The ER Diagram shown below presents the user table and how other tables that share some of the same attributes are interconnected by one or many relationships that are optional or mandatory.

Another important table is called 'one-stop experience' which allows the user to complete transactions from concert research or favorite artists, purchasing tickets, and accessing information about the city where the venue is located. The 'recommendations' table is important to this project in showing what attributes are valuable toward building a strong recommendation system for users. The 'concerts/festivals' table provides not only information about upcoming shows but also alerts on live streams and important data for promoters to utilize. The 'community' table connects users with other resources like the platform's commitment to inclusivity in the music community and its impact on local work in capacities like charities and non-profit initiatives. Overall, there are seven tables that each contain 50 rows of data in relation to the user-platform experience.



## Database Implementation

```
1  -- Produce a list of all the shows that Scott McLean attended at the Xfinity Center
2  SELECT OneStopExperience.Fan,
3         OneStopExperience.City, OneStopExperience.Ticket,
4         Artists.Venue
5  FROM OneStopExperience
6  JOIN Artists
7  WHERE OneStopExperience.Music = Artists.Music
8  AND Fan = "Scott McLean"
9  AND Venue = "Xfinity Center";
10
```

	Fan	City	Ticket	Venue
11	Scott McLean	Boston, MA	Floor	Xfinity Center
12	Scott McLean	Boston, MA	Floor	Xfinity Center
13	Scott McLean	Boston, MA	Floor	Xfinity Center
14	Scott McLean	Boston, MA	Floor	Xfinity Center
15	Scott McLean	Boston, MA	Floor	Xfinity Center
16	Scott McLean	Boston, MA	Floor	Xfinity Center
17	Scott McLean	Boston, MA	Floor	Xfinity Center
18	Scott McLean	Boston, MA	Floor	Xfinity Center
19	Scott McLean	Boston, MA	Floor	Xfinity Center
20	Scott McLean	Boston, MA	Floor	Xfinity Center
21	Scott McLean	Boston, MA	Upper Level	Xfinity Center
22	Scott McLean	Boston, MA	Upper Level	Xfinity Center
23	Scott McLean	Boston, MA	Upper Level	Xfinity Center
24	Scott McLean	Boston, MA	Upper Level	Xfinity Center
25	Scott McLean	Boston, MA	Upper Level	Xfinity Center

```
-- Execute a table showing the fan Sally Warner's upcoming concerts she's attending
-- at the MGM Fenway and the alerts she received for the show
SELECT * FROM User
WHERE Fan = "Sally Warner";
```

ID	Fan	FollowedArtist	UpcomingShow	MusicSync	Account	FollowedVenue	PastShow	Alert
1	3 Sally Warner	Pearl Jam	Post Malone	Apple Music	Registered	Roadrunner	Black Sabbath	Ticket Sale Reminder: Don't ...
2	13 Sally Warner	Foo Fighters	Red Hot Chili Peppers	Facebook	Registered	Roadrunner	The Who	Ticket Sale Reminder: Don't ...
3	23 Sally Warner	Flogging Molly	Primus	Apple Music	Registered	Roadrunner	Primus	Ticket Sale Reminder: Don't ...
4	33 Sally Warner	The Pixies	Sleater-Kinney	Facebook	Registered	Roadrunner	Sleater-Kinney	Ticket Sale Reminder: Don't ...
5	43 Sally Warner	Bruce Springsteen	The Who	Apple Music	Registered	Roadrunner	Beyonce	Ticket Sale Reminder: Don't ...

```
16  SELECT User.Fan, User.UpcomingShow, User.Alert, Recommendations.Venue
17  FROM User
18  JOIN Recommendations ON User.Fan = Recommendations.Fan
19  WHERE User.Fan = 'Sally Warner' AND Recommendations.Venue = 'MGM Fenway';
20
```

	Fan	UpcomingShow	Alert	Venue
1	Sally Warner	Post Malone	Ticket Sale Reminder: Don't ...	MGM Fenway
2	Sally Warner	Post Malone	Ticket Sale Reminder: Don't ...	MGM Fenway
3	Sally Warner	Post Malone	Ticket Sale Reminder: Don't ...	MGM Fenway
4	Sally Warner	Post Malone	Ticket Sale Reminder: Don't ...	MGM Fenway
5	Sally Warner	Post Malone	Ticket Sale Reminder: Don't ...	MGM Fenway
6	Sally Warner	Red Hot Chili Peppers	Ticket Sale Reminder: Don't ...	MGM Fenway
7	Sally Warner	Red Hot Chili Peppers	Ticket Sale Reminder: Don't ...	MGM Fenway
8	Sally Warner	Red Hot Chili Peppers	Ticket Sale Reminder: Don't ...	MGM Fenway
9	Sally Warner	Red Hot Chili Peppers	Ticket Sale Reminder: Don't ...	MGM Fenway
10	Sally Warner	Red Hot Chili Peppers	Ticket Sale Reminder: Don't ...	MGM Fenway
11	Sally Warner	Primus	Ticket Sale Reminder: Don't ...	MGM Fenway
12	Sally Warner	Primus	Ticket Sale Reminder: Don't ...	MGM Fenway
13	Sally Warner	Primus	Ticket Sale Reminder: Don't ...	MGM Fenway
14	Sally Warner	Primus	Ticket Sale Reminder: Don't ...	MGM Fenway
15	Sally Warner	Primus	Ticket Sale Reminder: Don't ...	MGM Fenway
16	Sally Warner	Sleater-Kinney	Ticket Sale Reminder: Don't ...	MGM Fenway

## Analytics, Reports, and Metrics

With the music landscape always changing there should be consistent modifications to the existing system in place for the database system's development life cycle. This could entail user demands changes in artists, venues, and genres and vendor models where BandsInTown would have to adjust their model in response to those changes. For example, if the alert that users receive that says 'Popular Nearby Events: Discover trending concerts near you this week' is no longer a useful notification then it can be removed or modified with a new alert that is more relevant in modern day.

```

21 -- Delete all alerts from the User table that say 'Popular Nearby Events: Discover trending concerts near you this week.'
22 DELETE FROM User
23 WHERE Alert = 'Popular Nearby Events: Discover trending concerts near you this week.';

```

	ID	Fan	FollowedArtist	UpcomingShow	MusicSync	Account	FollowedVenue	PastShow	Alert
1	1	John Smith	Rolling Stones	Beyonce	Facebook	Registered	Xfinity Center	Paul Simon	New Event Alert: [Band Name]...
2	2	Scott McLean	Black Sabbath	Bruce Springsteen	Spotify	Registered	TD Garden	Rolling Stones	Exclusive Presale: Get early ...
3	3	Sally Warner	Pearl Jam	Post Malone	Apple Music	Registered	Roadrunner	Black Sabbath	Ticket Sale Reminder: Don't ...
4	4	Raju Woodward	Red Hot Chili Peppers	Blink 182	Amazon	Registered	Lizard Lounge	Pearl Jam	Event Update: [Band Name] h...
5	6	Ben Kwan	Dropkick Murphys	Flogging Molly	Spotify	Registered	Bowery	NoFX	Reminder: Your favorite band ...
6	7	Donny Corliss	The Pixies	Primus	Apple Music	Registered	Paradise	Dropkick Murphys	Last-Minute Tickets: Limited ...
7	8	Andy Bernard	Sleater-Kinney	Paul McCartney	Amazon	Registered	MGM Fenway	The Pixies	Event Cancellation: ...
8	9	Kevin Malone	Sum 41	Paul Simon	Facebook	Registered	Wilbur Theater	Sleater-Kinney	Fan Club Exclusive: Join ...
9	10	Michael Scott	Pennywise	Rolling Stones	Spotify	Registered	Leader Bank Pavilion	Sum 41	New Tour Announcement: [Ba...
10	11	John Smith	Usher	Black Sabbath	Apple Music	Registered	Xfinity Center	Green Day	New Event Alert: [Band Name]...

Other questions to answer during the planning and analysis when making edits to the current database system:

- What problems could arise in the future and what measures are in place to respond to those problems?
- What is the current state of the platform and what improvements can be made to reflect the changing music landscape?
- Can any future changes to the existing system impact costs, technical aspects, and stakeholder goals? (Coronel/Morris, 2017).

### **Security Concerns**

Data privacy for the users that have accounts is protected and respected and is not shared with other companies or vendors in any capacity. A major concern would be a breach of data privacy and protection through the connections to other vendors. The platform contains not only personal data but also financial information for paid services. The key initiative is to inform stakeholders of what policies and procedures are put in place to prevent or reduce data breaches. Database performance will be monitored and updated regularly, and recovery and backup systems will be established and maintained to enhance data security and integrity. And emphasize to the stakeholders that user confidentiality and policy compliance are critical for the platform and its users (Coronel/Morris, 2017).

### **Architecture**

The platform that looks to be the most appropriate and effective for my project is to implement an n-tier data structure mainly because the platform I am focusing on is used on apps as well as desktop computers. I think this would allow for optimal performance with so many updates to the platform and constant changes to the server that has many tasks like data storage, processing, and communication. There would be flexibility with upgrades and revisions to the tiers and also a structure that is broken down into the necessary stages for better efficiency.



The benefits to using a cloud service like Amazon Web Services or Google Cloud is that it is the best route to take so that other key areas can be focused on to ensure the business model is executed properly. This option is also vital in that it allows for the created architecture to be scalable horizontally and vertically to accommodate increased user traffic. The storage demands overall will depend on factors like the number of artists, events, and user interactions, requiring ongoing monitoring and adjustments for quality performance. That is also why I think using a cloud service for content that pertains to events, band information, and user content like profiles would be better equipped in handling copious amounts of storage (Clausen, 2024).

### **Project Wrap-up and Future Considerations**

This project was vital in allowing me to understand how databases can be a useful tool in building a business model that is user friendly. It provides a structured and organized way to store large quantities of data. The implementation of databases like SQL are equipped for efficient data retrieval. The platform can quickly retrieve information about upcoming concerts, artist details, user preferences, and ticket sales by executing queries. For future consideration, if the platform continues to grow and accumulate more data, databases offer scalability options. They can handle increased data volumes and user interactions while maintaining performance.

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