Exploring Local Music Recommendation in the Long Tail

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Music consumption follows a *long-tail model:* a small number of popular artists receive the vast majority of attention (record purchases, radio time, digital streams) while other artists receive almost no attention. This model is often reinforced by automatic playlist algorithms on mainstream music stream services like Spotify, Apple Music, YouTube [Celma 2010]. As such, talented but often obscure local artists tend to be only rarely, if ever, recommended by the mainstream music stream services. However, if potential fans were exposed to relevant local music, they might be more likely to support local artists, attend more events at local music venues, and be more engaged in the local music scene in general.

To this end, our goal is to develop a system that can help people discover local artists based on the music they already enjoy. Our first attempt was a personalized radio service called MegsRadio. Using this system, a user could create a customizable stream of music based on popular artist seeds. Our playlist algorithm would then mix in similar sounding music from local artists. We succeeded in creating a professional-grade multi-platform app (web, iOS, Android) but we were unable to attract a large and consistent base of users. Our largest problem was competition from entrenched popular music streaming services. That is, getting people to adopt a new music service when they are already familiar with Spotify or Apple Music or YouTube Music proved to be very difficult. Our second challenge was obtaining enough local and mainstream music to be competitive with the music catalogs supported by large music streaming services.

To address these two problems, we have begun to develop a new locally-focused music recommendation service called Localify. Localify is different from MegsRadio in that it is integrated with Spotify. With Localify, users login using their Spotify account and select their local area and the distance they are willing to travel to an event. They then pick (mainstream) artists from their heavy rotation. These artists are used to seed their personalized local music recommendations. Users are then presented with a list of relevant local event recommendations and an automatically generated locally-focused Spotify playlist that can be listened to on one of the Spotify web or mobile apps.

Phase one of this project is to build a functioning web-app prototype and to collect a large amount of music information (artist similarities, events, genres.) For our data collection we are scraping the web to find as many music events as we can throughout the United States, currently we have over twenty-six thousand events from over five hundred cities to base our recommendations off of. This information has all been gathered through three main sources: Ticketfly, Facebook, and Spotify. Ticketfly provides information about larger events while Facebook lists a number of smaller events. Spotify provides use with a large amount of information about artists and is our main source for calculating similarity between artists. Using a combination of the three we have been collect information for over twenty-thousand events over the next four months.

Phase two is to improve upon our current ‘bare-bones’ recommendation system, not only to better recommend events, but to create better playlists. For this we will use results from the

2019 ACM RecSys data mining competition that focused on Spotify song recommendations. We are working on repurposing some of the top performing algorithms for artists and event recommendation. We will also be user testing this Summer to get input from potential users about what we have done well and what could be improved. Currently we have a live prototype that we will continue to work to improve and will be the base of our user testing and further development (The prototype can be found at localify.org). Our goal with this project is to create a fully functional, self sustaining system that will accurately help people discover local artists.

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1. *Celma, Oscar. "Music recommendation." Music recommendation and discovery. Springer, Berlin, Heidelberg, 2010. 43-85.*