Final Year Project Podcast Scrobbler

# Literature Review

## Popularity of Music Tracking

An application like *Podcast Scrobbler* may be useful, as there is clear demand shown for tracking habits in other areas. Spotify’s Wrapped is often the first such application that comes to one’s mind – when released initially, *“the internet descended into a frenzy of users screenshotting and sharing their streaming statistics all over social media”* (Adenuga, 2022, p. 3). There is an older, format-agnostic service however, which uses a technique called Scrobbling. Coined by Audioscrobbler (BBC News, 2003), Scrobbling is the act of automatically tracking music played on a system and storing it (Antonelli, 2023).

Last.fm is a service created almost alongside Audioscrobbler, for the purpose of using this data to make recommendations of new music to users and make the data sharable in the form of profiles. Although less so now, it proved to be a popular service, having in 2006 won Best Community Music Site at the BT Digital Music Awards (TechRadar, 2006). Last.fm has received a rejuvenation recently, with a Netherlands-based developer building a Discord bot for Last.fm with over 400,000 registered users (Krastrenakes, 2022). It is worth noting that alternatives to Last.fm exist which use the same scrobbling software, like Libre.fm.

## Music Podcasts

A podcast is an episodic series of audio files, spanning topics from news to fictional drama to music. The format as it is today was standardised in 2000, by attaching audio files to RSS feeds (Louis, 2000). The term *podcast* was defined in 2004 by Ben Hammersley, relating to the iPod device they were associated with (Hammersley, 2004).

Podcasting has been increasingly popular since its inception; Whereas in 2005 the term *podcast* returned “over 61 million hits” on Google (Berry, 2006, p. 144), the term now returns over 5 billion. There are over 2 million podcasts on Apple Podcasts as of 2023 (Lewis, 2023).

A particular genre of podcast is the music podcast, involving music being played, occasionally with commentary, like a radio show. Tracks are often mixed by the host in the form of a DJ Set – for example, the *Mind Over Matter* Podcast by *Embliss* (Brandwijk, 2022).

## Identifying a gap

Music podcasts can be scrobbled, however only by title of the podcast – not the tracks within. For users who repeat-listen to podcasts for the tracks within, listening data is effectively lost or mis-represented. However, tracks are often listed in the description i.e. in the case of *Mind Over Matter*.

## Other solutions and ones that get close

On many music services, it is possible to play a ‘radio’ of sorts, where tracks are played algorithmically based on a track, artist or genre (Kostek, 2018). It is possible to scrobble these using standard scrobbling services, and the individual tracks’ metadata can be gathered and either shared or used for recommendations. As tracks are only scrobbled when played at least halfway (Last.fm, n.d.), played tracks in a ‘radio’ are only scrobbled if the user likes them enough to keep listening rather than skip them.

In 2018, the BBC announced that their BBC iPlayer Radio service would be discontinued in favour of BBC Sounds (Taylor-Watt, 2018). When radio programmes with music are played, the media API with the respective platform is provided with the current track, as opposed to the name of the radio show. This effectively provides a scrobbling service reading the media API with the current track. Although this is a solution to the problem, it only works with radio shows from the BBC, rather than all podcasts.

Proton Radio and other labels have introduced an alternative way of publishing DJ sets through music streaming services (Wohlstadter, 2023). A DJ set is sliced into individual tracks which are played with gapless playback. As the tracks are labelled individually, they appear as the standalone track to a scrobbling service. Although the method works, only DJ sets by artists significant enough to be signed to a label can be published this way.

## Conclusion

After reading related articles, it is clear there is a gap in the field for a service that can scrobble tracks from podcasts, especially those that haven’t been presented in a format that makes this already possible(i.e. extensive back catalogues). I have yet to find literature showing demand for this exact application (minus a lone Reddit comment (c210344, 2016)), however building such an application may be useful.

# Project Plan

## Intended APIs and methods

### Obtaining podcasts

As creating and curating a podcast catalogue is out of this projects scope, I will allow for a podcast’s RSS feed to be downloaded given its URL.

### Parsing descriptions

I have previously created a prototype that scans through the description, finds a tracklist (by lines with a similar syntax), and stores the tracks played as an object. I’ll need to adapt this for more podcasts and make the script more efficient.

### Track identification

When a podcast is played, I will either use timestamps already in the tracklist, or interpolate the tracklist over the duration of the podcast to estimate the currently playing track.

### User Interface

I intend to create a native android application using Jetpack Compose. Although new to Jetpack, I have used declarative UI frameworks(Flutter and React.js) already and feel Jetpack would be very useful to also add to my skillset. It gives native performance unlike Flutter and React Native, and also integrates with the operating system better.

### Scrobbling

I will use Last.fm’s official scrobbling API, listed here: <https://www.last.fm/api/scrobbling>

## Podcasts that would allow this type of parsing

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| --- | --- |
| Lasermoon |  |
| Mind Over Matter by Embliss |  |
| The DJ Top 30 by DJFM Toronto |  |
| Uplifting Trance Sessions by DJ Phalanx  This may require a different algorithm, as there is no line structure but a very clear syntax |  |
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