

# ANNOUNCEMENT

## Bachelor Thesis

### KEYWORDS

- Digital Music
- Streaming
- Playlists
- Survival Analysis

### TOPIC: SURVIVAL OF THE COOLEST? INVESTIGATING THE DRIVERS OF A SONG'S SURVIVAL ON STREAMING PLAYLISTS?

The music industry is rapidly moving from physical to digital channels and from ownership-based business models (e.g., iTunes) to access-based business models (e.g., Spotify). Streaming services try to enhance the product discovery process by using recommendation systems and algorithmically-generated as well as user-curated playlists. Playlists bear potential for vast changes in media consumption. Playlist curators select songs for playlists following certain criteria that may be related to the content (e.g., a specific genre) or the context (e.g., moods or activities). The users' listening behaviors are in turn increasingly dependent on these curation decisions, rather than on the preference for a particular song or artist. At the same time it is important for artists to remain on the playlist as long as possible because the earning from streaming depend on the usage of the content. It is therefore crucial to understand the determinants of a song's "survival" on a playlist. That is, which factors will lead to a song being removed from playlists more quickly and which will trigger repeated listings?

The aim of this thesis is to find determinants for the duration of inclusion on a playlist and estimate the size of their relative impact. Potential drivers may be song characteristics, such as genre, the "starpower" of the artist, or audio features (e.g., the positivity of a song). In addition, effects may vary by the playlist type (e.g. curated by individual user vs. a company, content vs. context-based) or follower-base of a playlist.

In a first step, the student will have to screen the data and select appropriate variables for the analysis. This requires the development of a research framework that shows the potential determinants of playlist survival. The second step will be the econometric analysis. Well established methods such as the Cox Proportional Hazard model or the Kaplan-Meier estimator can be used to determine the impact of the variables on the duration of playlist inclusion.

Solid math and data analysis skills are required to write this thesis.

### LITERATURE:

- **Aguiar, Luis, and Joel Waldfogel.** 2018. "Platforms, Promotion, and Product Discovery: Evidence from Spotify Playlists", EUR - Scientific and Technical Research Reports. <https://ec.europa.eu/jrc/en/publication/eur-scientific-and-technical-research-reports/platforms-promotion-and-product-discovery-evidence-spotify-playlists>
- **Battacharjee, Sudip, Ram D. Gopal, Kaveepan Lertwachara, James R. Marsden, and Rahul Telang.** 2017. "The Effect of Digital Sharing Technologies on Music Markets: A Survival Analysis of Albums on Ranking Charts." *Management Science* 53, no. 9 (September 1, 2007): 1359–74.  
<https://doi.org/10.1287/mnsc.1070.0699>.
- **Datta, Hannes, George Knox, and Bart J. Bronnenberg.** 2018. "Changing Their Tune: How Consumers' Adoption of Online Streaming Affects Music Consumption and Discovery." *Marketing Science* 37 (1): 5–21.  
<https://doi.org/10.1287/mksc.2017.1051>.
- **Im, Hyunsuk, Haeyeop Song, and Jaemin Jung.** 2018. "A Survival Analysis of Songs on Digital Music Platform." *Telematics and Informatics* 35 (6): 1675–86.  
<https://doi.org/10.1016/j.tele.2018.04.013>.

#### SUPERVISOR:

- Daniel Winkler, M.Sc. <https://www.wu.ac.at/imsm/jobs/team/daniel-winkler>
- Dr. Nils Wlömert <https://www.wu.ac.at/imsm/jobs/team/nils-wloemert>
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#### APPLICATION

Applications with CV and transcript of records should be sent to Daniel Winkler ([dwinkler@wu.ac.at](mailto:dwinkler@wu.ac.at)).