SISTEMAS DE RECOMENDACIÓN

Assignment

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Assignment

Spotify Million PlayList Challenge

- **The Spotify Million Playlist Dataset Challenge** consists of a dataset and evaluation to enable research in music recommendations.
- It follows the **ACM RecSys Challenge** 2018 edition.
- This is a dataset of 1 million playlists consist of over 2 million unique tracks by nearly 300,000 artists, and represents the largest public dataset of music playlists in the world.
- Each playlist in the MPD contains a playlist title, the track list (including track IDs and metadata), and other metadata fields (last edit time, number of playlist edits, and more).
- The goal of the challenge is to develop a system for the task of **automatic playlist continuation**.
- Participants have to create **a ranking of 500 recommended candidate tracks** for each target playlist.

Objective

- The objective of the assignment is to **read** and **process** the training playlist, and then **recommend** tracks from the dataset for the test playlist, and finally **evaluate** the results based on a provided set of gold data.
- As the golden truth for the challenge playlists is not provided we will use a modified dataset for training and evaluation:
  - `https://irlab.org/~sr-gced/`
    (Usuario: gced – Password: replace-imperial-sherry)
  - Training set is the challenge training dataset with 10000 playlists removed
  - Test set is the remaining 10000 playlists, split the same way as the challenge set.
- There are no mandatory technologies, but a proper implementation of the solution is expected.

Rules

- You are expected to work in **teams of 3** people
- At the end of the course, every student should be able to explain and modify the work done. Do not over-specialise in a particular part of the task
- Evaluation will be based on both the accomplishment of the requirements and the quality of the project, including its efficiency and effectiveness.

Iteration 0 (22/02/2026)

- We need a baseline to compare our results against. Recommending popular items is a simple, non personalized approach that usually gives decent results.
  - You must process the training dataset and determine the most popular tracks.
  - For each playlist in the test dataset you must generate a ranked list of 500 tracks.
  - Tracks already present in the playlist seed must not be presents in the list of recommended tracks.
  - Results must be produced using the format specified in the challenge.
- We need to evaluate our results. We will use the metrics defined in the challenge: R-Precision, NDCG and Recommended Songs clicks.

References

Santosh Kabbur, Xia Ning, and George Karypis.
Fism: factored item similarity models for top-n recommender systems.
In Proceedings of the 19th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, KDD '13, page 659–667, New York, NY, USA, 2013. Association for Computing Machinery.

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Sparse linear methods with side information for top-n recommendations.
In Proceedings of the Sixth ACM Conference on Recommender Systems, RecSys '12, page 155–162, New York, NY, USA, 2012. Association for Computing Machinery.