



- Recommending **similar elements**
 - ↑ Click rate, sales, or conversion rates
 - ↓ It does not necessarily induce users to explore new and diverse content.
 - Users can become **unintendedly trapped in filter bubbles** limiting their openness and cultural awareness.
 - Music platforms have been acknowledged to **recommend items in circumscribed tiers** in connection with **social structures**.
- Harnessing recommenders with filter bubble-aware mechanisms is essential to **open users perspectives**, foster **healthy consumption patterns** and increase user-perceived **quality**.

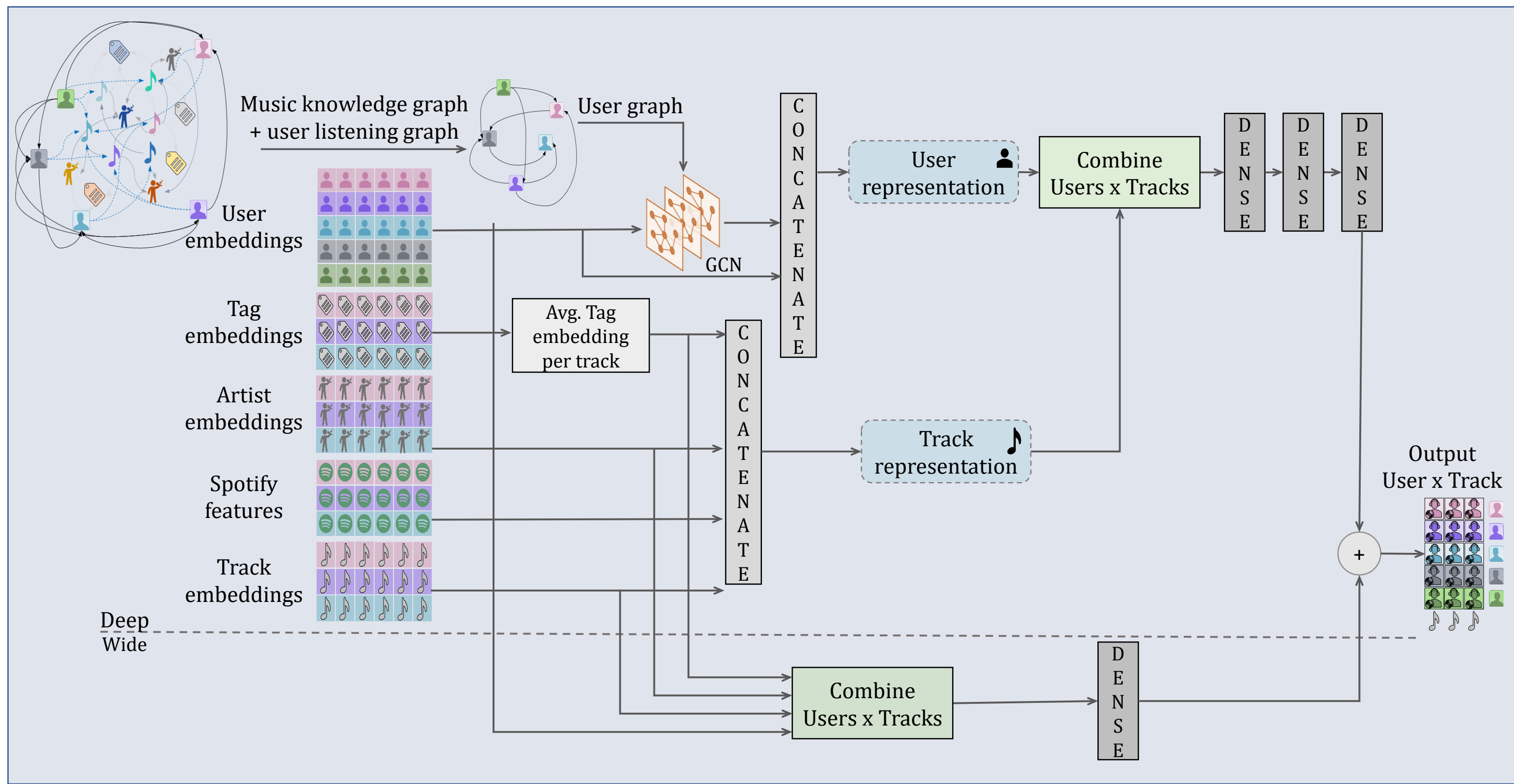
We tackle the **music recommendation problem** by fostering **track recommendation diversification** in a **filter bubble awareness setting**

We developed MRecuri inspired by a **graph convolutional network** and a **Deep & Wide** architecture

MRecuri showed the potential for **expanding users' listening diversity and novelty** compared with state-of-the-art techniques while maintaining relevance.

	Traditional	State-of-the-art	Original structure
Avg. relevance Improvements	60%	29%	-
Avg. diversity/novelty improvements	25%	20%	6%

- MRecuri was among the **best performing techniques** for most **metrics**, including precision and nDCG.
- MRecuri was able to **improve the diversity/novelty** of the **original graph**.
- **Novelty was higher than diversity**. Even when recommending similar tracks, they differed from those in the listening history.
- MRecuri achieved the **highest structural novelty results**. Recommendations were **outside the influence** of the co-listened community of the already listened tracks.



Input: track knowledge graph, user listening history and interactions.
Output: for each user, a ranking of tracks according to their listening likelihood strength.

Loss definition favours recommendation diversity.

Interactions between users and tracks that are farther away out of the bubble will carry a higher weight than interactions in the same bubble.

There is still work to do!

- Perform a more extensive evaluation in large-scale scenarios.
 - Perform an ablation study.
 - Include information of the listening history as an ordered sequence.
 - Explanations to better guide users in broadening their interactions.
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