Dear Aparna, Joe

Hope you had a wonderful experience at the IACS Project Showcase on May 8, 2018! We have thoroughly enjoyed working on the RecSys challenge so far and it was lovely to meet and present to you both at the Spotify office and at the showcase.

Please find below **our project deliverables so far**, which are a part of our final submission for the Capstone course.

1. GitHub repository with all our code and presentations for each milestone: <https://goo.gl/opBK1E>
2. Poster presented at the IACS Showcase, May 8: <https://goo.gl/WYgbwg>
3. Final presentation for the Capstone course: https://goo.gl/EMwLQR

**Our current status** as part of the final milestone is:

1. We have working pooling and ranking models which rank songs based on lyrics, audio features, context features, genres, etc.
2. We used Bayesian optimisation to find weights for each ranking feature.
3. Came up with new embeddings, such as the LSTM embedding for lyrical data and an embedding for contextual keywords based on action words present in Genius.com annotations.
4. Augmented contextual data with a UX experiment which aims to understand playlist preferences of users in terms of moods and occasions in which a playlist is likely to be used.

**Our future plan for the project are:**

1. Generating results for the million playlists and submission to RecSys.
2. Harnessing user studies for utility conditioned playlists. (For eg: Dating vs Workout).
3. Adding conditioning based on user mood at the time of creating playlist.
4. Improving LSTM embeddings to prevent mode collapse.
5. Improving contextual embedding (we tried sense2vec)
6. Explore Bayesian methods for pooling

We’d love to hear your thoughts on the project and hope to continue working with you in future!

Sincerely,

Mehul Smriti Raje, Benjamin Sanchez-Lengeling, Timothy Lee, Spandan Madan Team Spotify for APCOMP 297r