

# Midterm review for APSTA - GE-2017

*Jing Xie*

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## Understanding the questions

The goal of the project is to build a music recommender based on user's listening history. You have a very well defined question with well designed research project. So far you have made a lot of progress and you already have a recommender built. I would tag your project as green since I believe you can learn a lot from this well designed project.

The project is largely based on the package called recommenderlab and you are using the collaborative filtering algorithms for building the system.

## My review Questions

- You can easily convert the data from raw data format to the utility matrix of shown in your slide using `group_by` and `spread` command in `dplyr` package. It might be helpful to speed up the formatting as `dplyr` is a c++ based language.
- I am not sure if this is something you would like to do, but this is just some idea that you can try out:
  - As the data set you obtain is very large. working with the whole dataset can be very challenging. One thing I am thinking might be working is to preprocess the artists into multiple groups. Since you can obtain the tags for each artist you might be able to classify the artists into several groups and reduce the dimension of the utility matrix.
  - I personally believe users listen to music by genres. The algorithm should recommend to the users music's genre that is proportional to the original genre pool. For example if a user likes 3 jazz artists and 5 classic, the recommender should recommend similar proportion of jazz : classic instead of heavily recommending one. This could be also a way of testing the algorithm.

## Conclusion

I think you are working on a very meaningful project and I believe it would yield some pretty nice result.