

Personalized Recommendation of TV Program

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There are hundreds of TV stations broadcasting thousands of programs every day. Because of this large amounts of data, it is really hard for the viewers to find new good programs to watch. Our task is to make a personalized recommendation to help out these people.

We are focusing on free mobile application released on Google Play platform for Android smartphones and other Android devices. The application currently provide actual TV program for multiple TV stations and already recommends some programs, however its recommendation is not personalized.

Most research in this area is focused on recommendation for electronic program guide¹, recommendation for video-on-demand² or similar services. Because uniqueness of our dataset we are expecting different results compared to electronic program guide and video-on-demand recommendations.

When we compare our data to data available from set-top boxes for EPG recommendation, or to data from VOD services, our data are closer to EPG, because:

- EPG is recommending for Live TV programs (to contrariety with VOD) and live TV programs are new, so recommendation algorithms cannot use historical data. Also live TV programs mostly do not have so detailed metadata compared to VOD. [1] Our app is also designed for live program.
- Most people are watching live TV in time-based patterns, so they are interested in different content in weekends, in evenings, etc. [1] EPG has to deal with this fact (to contrariety to VOD), as we have to too.
- EPG data do not have explicit feedback, but they have a lot of implicit feedback like watching times, channels switching, recording times, etc. However, quite a lot of data are irrelevant. Our app do not have explicit feedback, but have a lot of implicit one [1] – like EPG, however we the quantity of the feedback vary,

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¹ Also known as EPG

² Also known as VOD

because a lot of relevant data (for our needs) are not recorded automatically, but users have to enter it manually. Type of data also vary, see next paragraph.

Our dataset is sets of logs from application that contains these types of logs:

- Program was added to watch list
- Program was removed from watch list
- User choose to be notified for some program
- User canceled notification for some program
- User showed certain program list
- User scrolled certain program list
- User searched some query
- User launched the app
- User changed type of selection
- User choose certain time
- User changed channel selection
- User answered to questionnaire

References

- [1] Zibriczky, D., Petres, Z., Waszlavik, M., & Tikk, D. (2013, December). EPG content recommendation in large scale: a case study on interactive TV platform. (2013).