**Introduction**

**an introduction/overview/executive summary section that describes the dataset and summarizes the goal of the project and key steps that were performed**

key steps

**Method**

**a methods/analysis section that explains the process and techniques used, including data cleaning, data exploration and visualization, insights gained, and your modeling approach**

Data cleaning

Talk about the cleaning process of edx data. Clean title to title year, timestamp to time,

partition creation 80% / 20%, test set training set semi join to ensure movie ID and user ID are in both train set & test set

Data exploration

Talk about the 4 effects in train set.

1. Movie also with chart
2. User also with chart
3. Genre also with chart
4. Rate per Year also with chart

Visualization (included in data exploration)

Insights gained

Modeling approach

**Result**

**a results section that presents the modeling results and discusses the model performance**

RMSE result

**Conclusion**

**a conclusion section that gives a brief summary of the report, its limitations and future work**

further discussion on