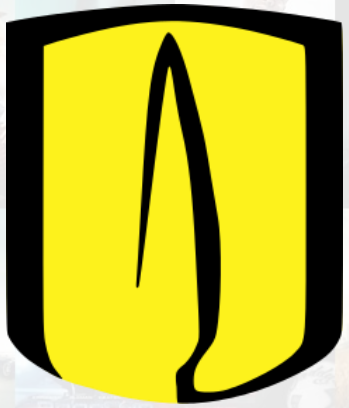
MOVIE GENRE CLASSIFICATION



Deep Learning Final Project

Nicolás Lozada 201727313

Camilo Yate 201630371

Movies Datasets

Two different datasets were provided in order to predict the movie genre: The movie poster and its plot.

The dataset is formed by **11,278** movie posters and plots. The data set has been divided in training and testing set: **7,895** (70%) and **3,383** (30%) movies respectively.

In poster images dataset, each image is stored in two analogous version: full color and grayscale. For classification, purposes, in order to get better predictions, full color version will be used.

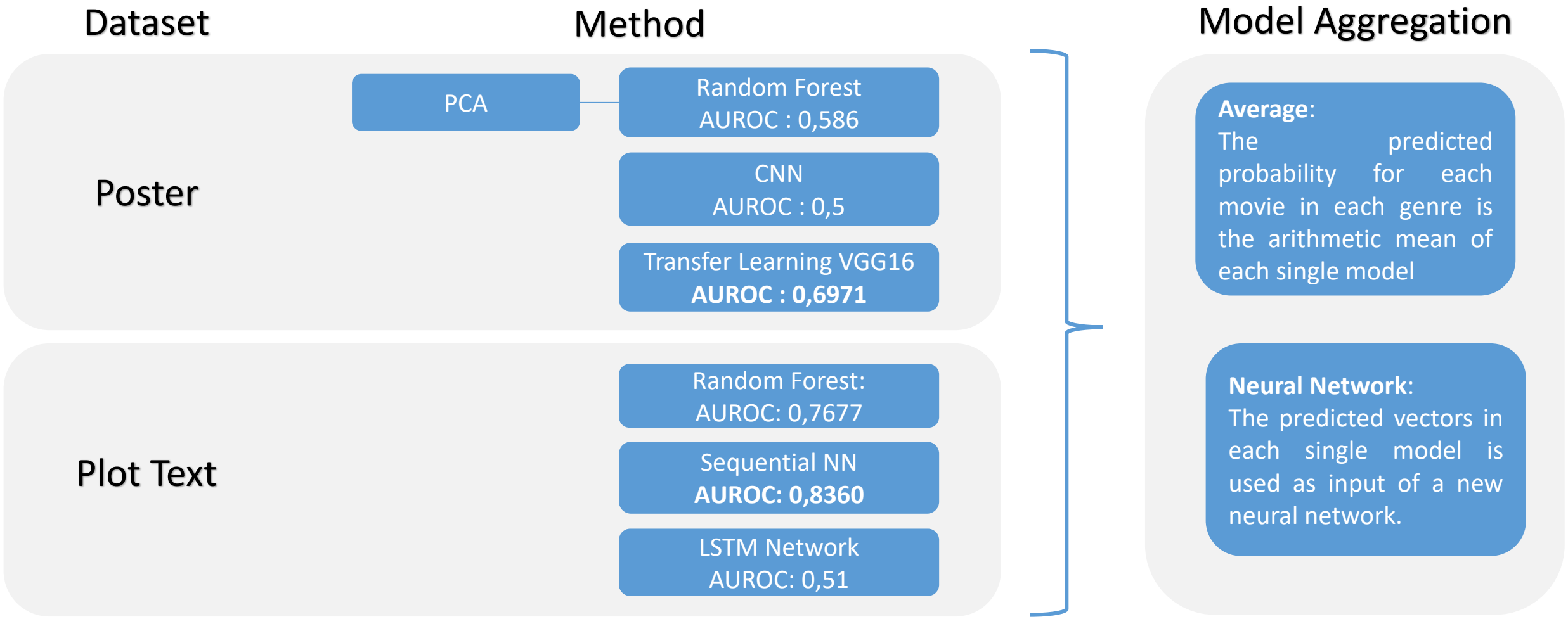
For movie plots each movie has a complete description of the plot in natural language format. In this dataset text mining techniques will be applied for getting high performance in classification.

In training set, each poster is classified among **24** different genres (target variable). One movie can belong to several genres.

The proposed classification methodology will be able to predict the genres classification for a movie, given its poster image and plot.

Genre Classification

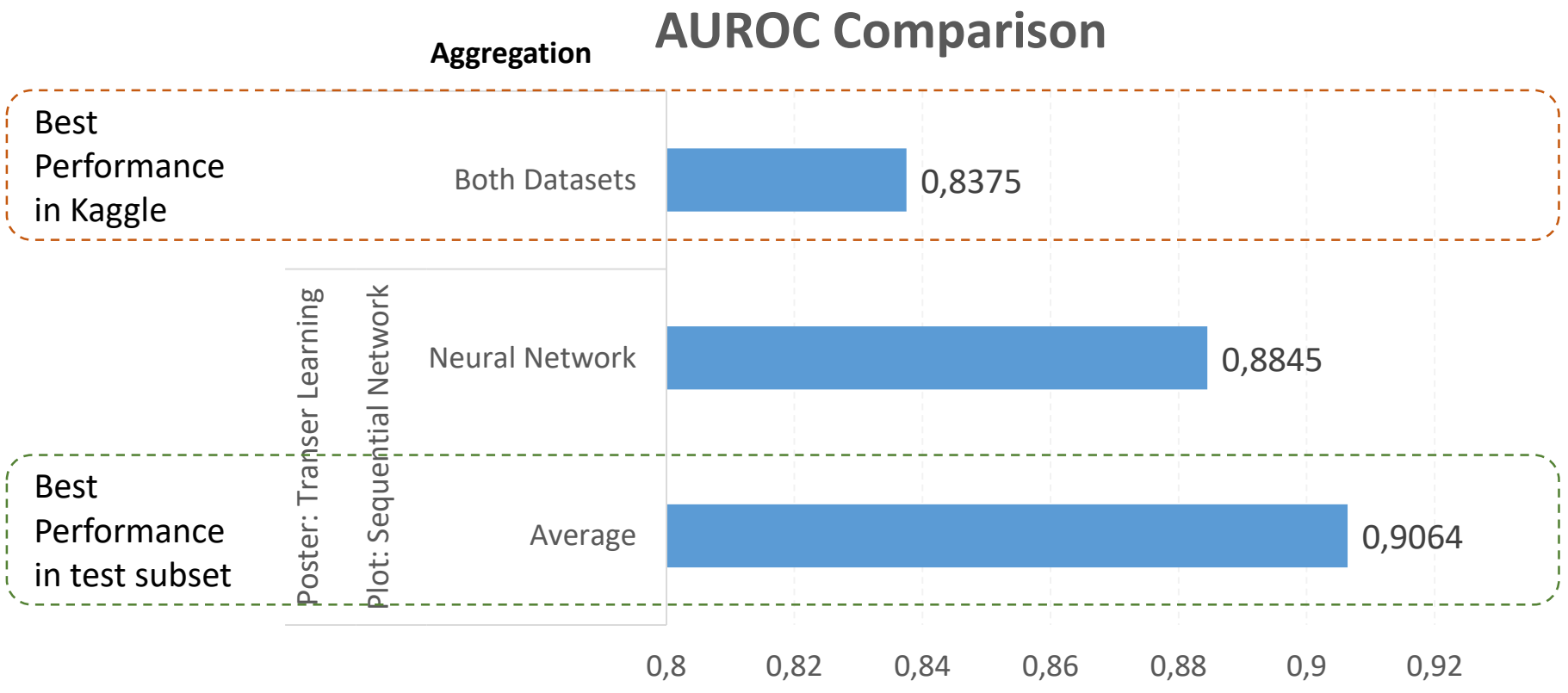
Genre classification could be divided in three stages: First each dataset will be used for a single classification, then both models will be joined in order to asses genres to each movie.



Models with the best performance are shown in **bold**

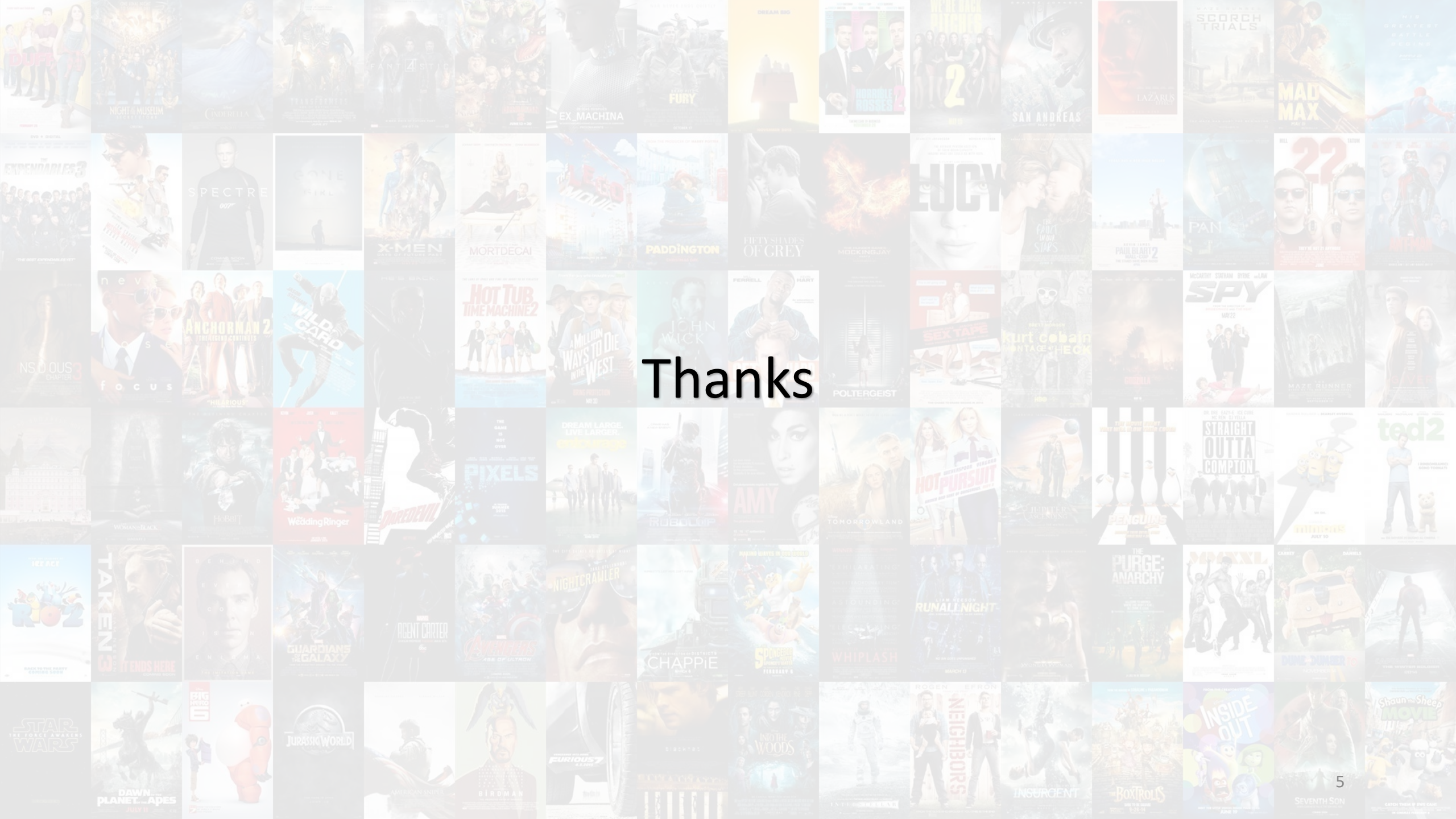
Genre Classification

One final approach is build a neural network taking as input vectors the two data sets at once. The result of the different approaches are the following



5	▾ 4	Camilo Yate, Nicolás Lozada		0.87321	17	18h

In conclusion, the best model will be the average between transfer learning network for images and a sequential network for movie plot. However, the best model in Kaggle was the neural network taking as input vectors the two data sets at once


Thanks