

Practice lab: Deep Learning for Content-Based Filtering

In this exercise, you will implement content-based filtering using a neural network to build a recommender system for movies.

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NOTE: To prevent errors from the autograder, you are not allowed to edit or delete non-graded cells in this lab. Please also refrain from adding any new cells. **Once you have passed this assignment** and want to experiment with any of the non-graded code, you may follow the instructions at the bottom of this notebook.

1 - Packages

We will use familiar packages, NumPy, TensorFlow and helpful routines from [scikit-learn](https://scikit-learn.org/stable/) (<https://scikit-learn.org/stable/>). We will also use [tabulate](https://pypi.org/project/tabulate/) (<https://pypi.org/project/tabulate/>) to neatly print tables and [Pandas](https://pandas.pydata.org/) (<https://pandas.pydata.org/>) to organize tabular data.

```
In [1]: import numpy as np
import numpy.ma as ma
import pandas as pd
import tensorflow as tf
from tensorflow import keras
from sklearn.preprocessing import StandardScaler, MinMaxScaler
from sklearn.model_selection import train_test_split
import tabulate
from recsysNN_utils import *
```