- Welcome!
- About this course
- Module 1 - Machine Learning
- Module 2 - Regression
- Module 3 - Classification
- Module 4 - Clustering
- **Module 5 - Recommender Systems**
  - **Learning Objectives**
  - **Recommender Systems (4:33)**
  - **Content-based (5:12)**
  - **Lab: Content-based**
  - **Collaborative Filtering (7:06)**
  - **Lab: Collaborative Filtering**
  - **Graded Review Questions**
    Review Questions
- Final Exam
- Certificates and Badges

Lab: Collaborative Filtering on Movies

Recommendation systems are a collection of algorithms used to recommend items to users based on information taken from the user. These systems have become ubiquitous can be commonly seen in online stores, movies databases and job finders. In this notebook, we will explore recommendation systems based on Collaborative Filtering and implement a simple version of one using Python and the Pandas library.

For this lab, we will use IBM Watson Studio. It helps you better understand how an environment for ML project in scale looks like. Take the following steps to complete this lab:

A- Create an account in Watson Studio if you don't have (If you already have it, jump to step B).

1. Browse into IBM Watson Studio
2. Click on '**Start your free trial**'
3. Enter your email, and click '**Next**'
4. Enter your Name, and choose a Password. Then click on '**Create Account**'
5. Go to your email, and confirm your account.
6. Click on '**Proceed**'
7. In "**Select Organization and Space**" form, leave everything as default, and click on '**Continue**'
8. It is done. Click on '**Get started!**'

Notice 1: In case that you cannot sign-up for the IBM Cloud, when signing up for the IBM Cloud account specify your country/region as the United States or Canada. This is a temporary workaround to access the free version of the service.

Notice 2: If you already have an IBM Cloud account (perhaps you created it for another course) which you created by specifying your country like the United States or Canada, and you reached to the usage limit, you have 2 options: 1) Create a new IBM Cloud account with a different email address and country as US or Canada. 2) Use the promo code that gives you 6 months of trial. The details about how to get the promo code are provided in the next section.

B- Sign in into Watson Studio and import your notebook

1. Sign in into IBM Watson Studio

3. Select '**Data Science**' as type of project.

4. Give a name to your project, and a description for your reference, then setup your project as following and click "**Create**".

Notice: You have to create an IBM Object Storage, if you don't have any IBM Object Storage (you can use the free Lite plan)

5. From the top-right, Click on '**Add to project**', and then select '**Notebook**'.

6. In the '**New notebook**' form, click on '**From URL**', and enter this Notebook URL: **https://s3-api.us-geo.objectstorage.softlayer.net/cf-courses-data/CognitiveClass/ML0101ENv3/labs/ML0101EN-RecSys-Collaborative-Filtering-movies-py-v1.ipynb**

7. Give the notebook a proper name and description and click on `**Create Notebook**` to initialize the notebook

C. Complete the notebook

1. Start running the notebook

2. Complete the notebook based on the description in the notebook.

Want to learn more?

When it comes to Machine Learning, you will likely be working with large datasets. As a business, where can you host your data? IBM is offering a unique opportunity for businesses, with 10 Tb of IBM Cloud Object Storage: Sign up now for free

IBM SPSS Modeler is a comprehensive analytics platform that has many machine learning algorithms. It has been designed to bring predictive intelligence to decisions made by individuals, by groups, by systems – by your enterprise as a whole. A free trial is available through this course, available here: SPSS Modeler.

Also, you can use Watson Studio to run these notebooks faster with bigger datasets. Watson Studio is IBM's leading cloud solution for data scientists, built by data scientists. With Jupyter notebooks, RStudio, Apache Spark and popular libraries pre-packaged in the cloud, Watson Studio enables data scientists to collaborate on their projects without having to install anything. Join the fast-growing community of Watson Studio users today with a free account at Watson Studio

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