

# **Assignment #2**

Binary Classification & Multi-class Classification

# Overview

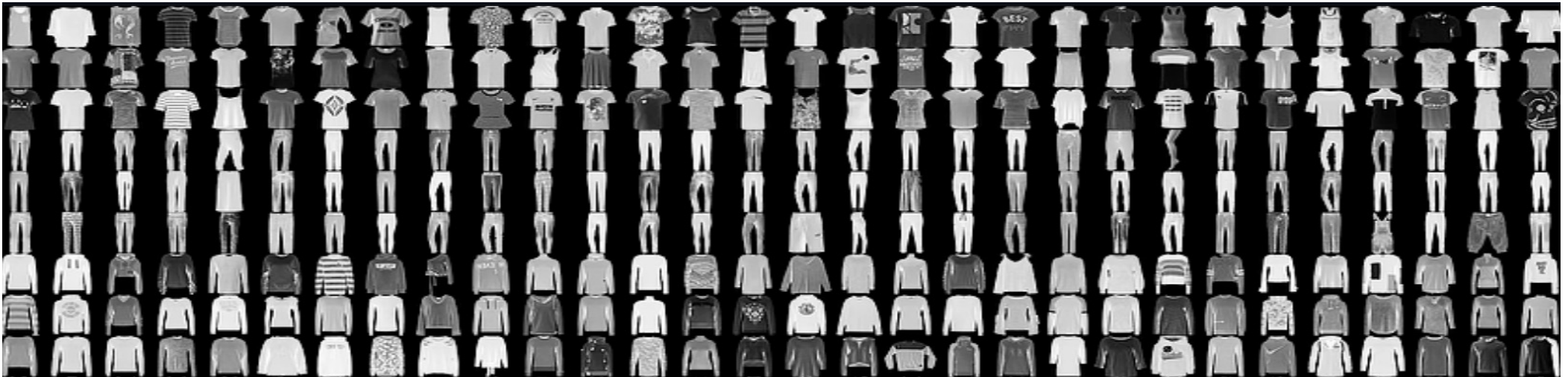
- Classification is a core and fundamental task in computer vision.
- In binary classification you will need to implement a **logistic regression model** that classifies whether a person is rich or poor.
- In multi-class classification you will design and train a multi-layer perceptron (MLP) and **not using any convolution layers** from scratch that predicts the class label of a clothes image.

# Binary Classification: Grading & Deadline

- 25 points
- Submit **A2\_binary\_classification.ipynb** to the CU.
- Due on Oct 4, 11:59 pm

# Multi-class classification: Fashion-MNIST Dataset

- The dataset is a dataset of Zalando's article images.
- The Fashion-MNIST consists of a training set of 60,000 examples and a test set of 10,000 examples.
- It has 10 classes: 't-shirt', 'trouser', 'pullover', 'dress', 'coat', 'sandal', 'shirt', 'sneaker', 'bag', 'ankle boot'.



- The train/val/test splits are provided
- Your model will be evaluated on the test set using the accuracy metric.

# Things you cannot do

- You cannot submit results predicted by others.
- You cannot copy trained models from others.
- You cannot copy code from others, internet, GitHub ...
- You cannot collect more images to train your model in order to boost performance.
- You cannot use the weights of pre-trained model.

Any violation will result in 0 scores!

# Submission and grading

- Submit your predictions on the test images to Kaggle for evaluation.  
<https://www.kaggle.com/t/44dc917fe20b44a3b3c20954c5084975>
  - Use your SID as your team's name
  - Assignment score evaluation: **Accuracy** of your prediction
- Submit **A2\_multi\_classes\_classification.ipynb** to the CU.
- Grading:
  - 25 points
  - Bonus points to top 3 teams
- Due on Oct 11, 11:59 pm