Setup

Data

All data neccessary for running this project can be downloaded by running the following script:

```
cd data && download_data.sh
```

The script will download the following folders:

- **images**: images of dresses and models wearing those dresses that the networks were trained on (cca 15.000 product images and 60.000 model images).
- **clustering**: models and data for clustering of available model images to create a paired dataset of 1 product image + 1 model image
- **features**: feature vectors for both product images and clustered model images for retrieval
- **models**: trained GAN models to modify attributes of images (The models were trained using several GANs repositories: **Pix2Pix** and **CycleGAN** on https://github.com/sonynka/pytorch-CycleGAN-and-pix2pix and **StarGAN** on https://github.com/sonynka/StarGAN.

Note: The original dataset was scraped from various fashion online stores and contains cca 90.000 images. For the purpose of this project, I only used category dresses. Code for scraping and the whole dataset can be found here: https://github.com/sonynka/fashion_scraper.

Requirements

To download Anaconda package manager, go to: *https://www.continuum.io/downloads*. After installing the conda environment locally, proceed to setup this project environment.

Install all dependencies from conda_requirements.txt file.

```
conda create -n fashion_gan python=3.6
source activate fashion_gan
conda install --file conda_requirements.txt
pip install -r pip_requirements.txt
```

To start a jupyter notebook in the environment:

```
source activate fashion_gan
jupyter notebook
```

To deactivate this specific virtual environment:

```
source deactivate
```

If you need to completely remove this conda env, you can use the following command:

```
conda env remove --name fashion_gan
```