Lab 1-1

classification

Ds : MNIST

Model. Custom

Lab 1-2

classification

Ds : CIFAR

Model. Custom

AlexNet (build)

Loss : Cross Entropy Loss

opt : Adam

Lab 1-3

Image generation

Ds : MNIST

Model: Autoencoder

Loss: MNELoss

optim: AdamW

Lab 2-1

DS1: list off all images inside Classes folders

DS2: train / test folders, each one has classe f.

DS3: ImageFolder

DS4: Labels in images name

Lab 2-4

Image Search

DS: Image Folder

Model: Efficent Net (Pretrained)
PCA

Acc. : cos similarity

Lab 3-1

Segmentation

Ds: Ready

Model: UNet (build)

Loss : Cross Entropy

opt : AdamW

Lab 3-2

Image segmentation

Ds: csv

Model: UNet (Pretrained)

Loss : BCE

optim: AdamW

Lab 4-1

Object detection

Ds: dict. {}

Model: Faster R-CNN (Pretrained)

Metric: mAP

opt: AdamW

Lab 4-2

object detection

Ds: yaml

Model: Yolo

Test bank

LAB1_2

Image coloring

Ds: CIFAR

Model: UNet (build)

Loss: MSE + L1

opt: AdamW

LAB2-2

Classification

DS: .mat

Model: Custom

Loss: Cross Entropy

opt: AdamW

Not_Q1

Classification

DS: Image Folder

Model: ResNet18 (Pretrained)
+ ensembling

Loss: Cross Entropy

opt: SGD

Metric: Accuracy

Not_Q2

Classification (image preprocessing)

Ds: .csv

Model: Custom

loss: Cross Entropy

opt: SGD

Metric: Accuracy

Not_Q3

Image denoising / deblurring

Ds: Custom

Model: UNet (build)

loss: MSE

opt: Adam