PPT 1:

Difference between traditional CV and DL based CV

Typical tasks in CV

CV pipeline

Digital image as a 2D function and image representation

Contour detection

PPT 2:

Edge detection and canny

Line detection and hough transform

PPT 3:

Image features

SIFT

Affine transformations

PPT 4:

Intro to CNN

Image augmentation

PPT 5:

Dropout

Feature scaling

Internal covariate shift

Batch normalization

Global average pooling

Transfer learning - AlexNet, VGG16

Pretrained network as classifier

Fine tuning

Model callbacks

ROC AUC

PPT 6:

Inception V1

ResNet

MobileNet

PPT 7:

Visual embeddings

Reverse image search

Face recognition / identification

Siamese network

PPT 8:

Type I and II errors

ROC AUC

Evaluation of models

PPT 9:

Object detection

Bounding box regression

RCNN family

Mean average precision

PPT 10:

YOLOv1

Code

Reverse image search sift

Transformations

Binary and multiclass classification

Advanced CNN archs

Visual similarity search

RoC and AuC analysis