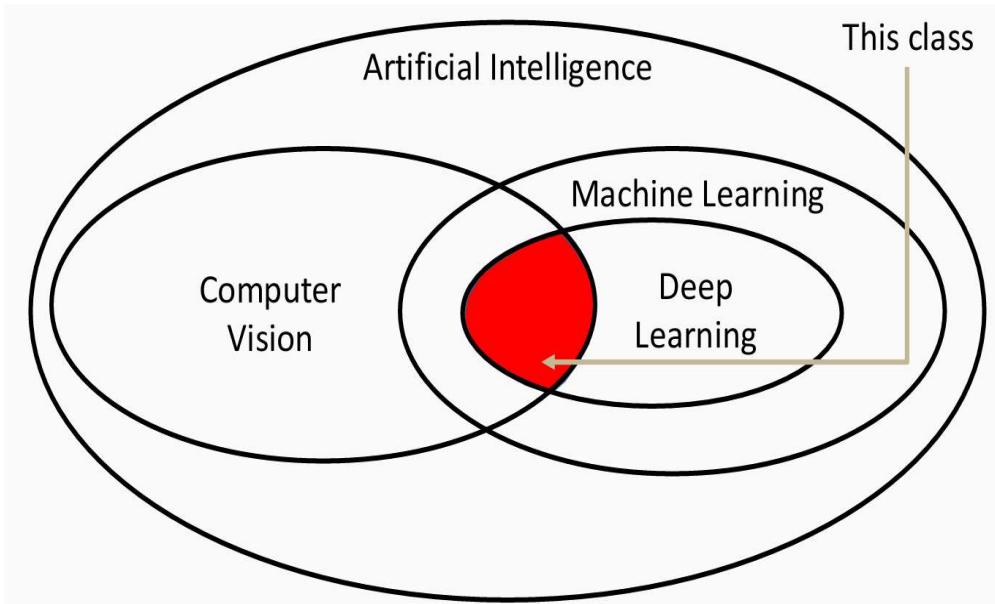


第一课讲了课程梗概

本课程主要利用深度学习方法讲述CV与ML中的相关知识点

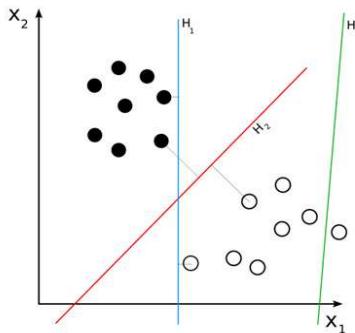


1. 深度学习基础

CV的一个核心任务是图像分类

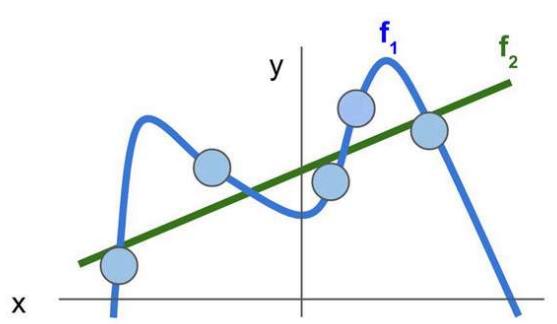
分类方法有：

i. 线性分类



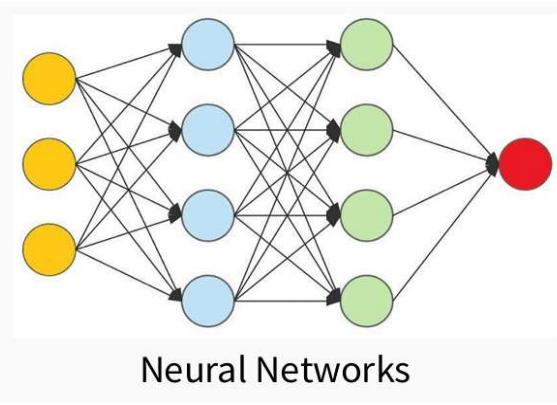
Linear Classifier

ii. 正则化与最优



Regularization & Optimization

iii. 神经网络



Neural Networks

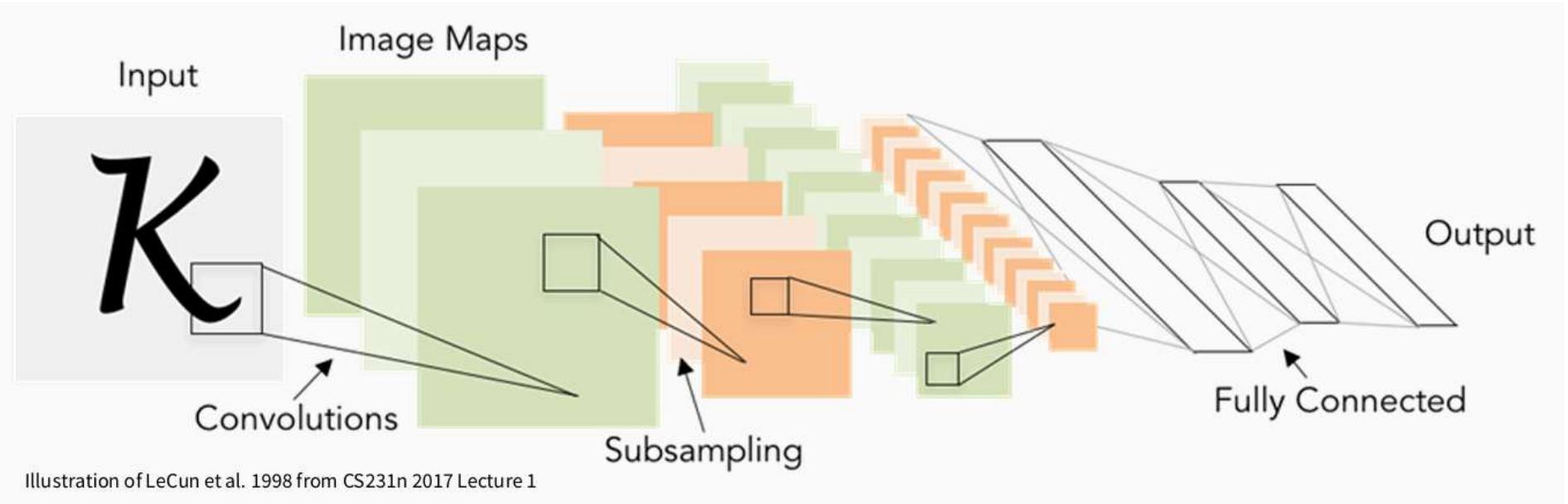
2. 感知理解视觉世界

i. 图像分类的tasks有

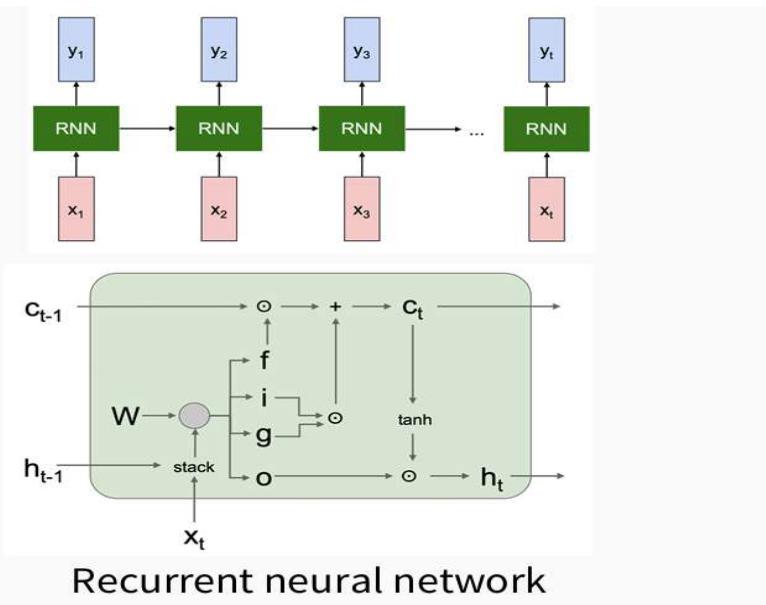
- a. 直接分类classification
- b. 语义分割semantic segmentation
- c. 目标检测object detection
- d. 实例分割instance segmentation
- e. 视频分类、多模态视频理解、可视化与理解等

ii. 超越多层次感知机的模型有

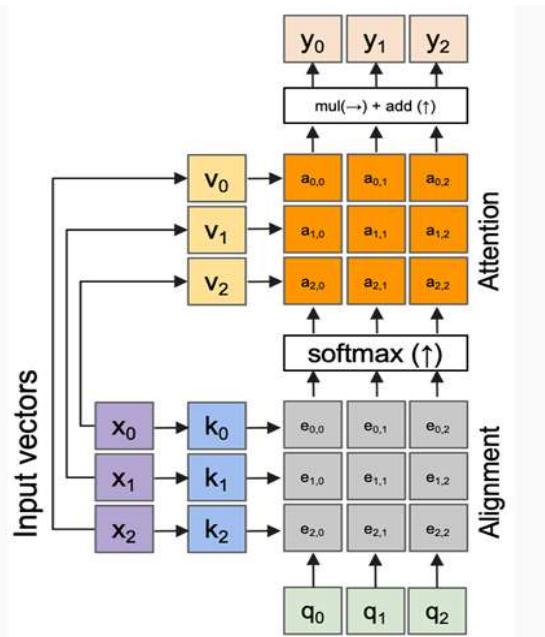
- a. CNN(convolutional neural network卷积神经网络)



b. RNN(recurrent neural network 循环神经网络)



c. Attention mechanism & Transformers



Attention mechanism / Transformers