

Yolov4、Yolov7、Yolov9的發展過程

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Scientist vs Engineer

Scientists use systematic methods
to solve long-term problems

Engineers use existing methods
to solve current problem

We were lucky that ImageNet was built in 2010. It's like
a visual dictionary

Start in 2007

Debut in CPVR'2009

Stop in 2010

Total classes: 21K

Total images: 14M

R-CNN series two-stage object detectors

R-CNN (2013/11), Fast R-CNN (2015/4)

• Faster R-CNN (2015/6)

Region Proposal

CNN Feature Extraction

SVM classification

設計物件偵測系統考量

1. network architecture
2. feature integration method
3. detection method
4. loss function
5. label assignment method
6. training method

基本問題

要以既存的模型為基礎或另創新模型

Model Scaling

inference speed at Edge

Data loss during feedforward

Model scaling 會受哪些因素波動

Possible scaling factors include:

resolution

depth

width

stage