

Inception Module: Multi-Scale Architecture

CORE IDEA

Multiple parallel conv paths with different receptive fields

Inception Structure

Input Feature Map

1×1 reduce

1×1 reduce

1×1 reduce

Max pool

1×1 conv

3×3 conv

5×5 conv

1×1 conv

Concatenation (Filter Concat)



Multi-Scale

Captures features at different scales



Efficiency

1×1 convs reduce dimensions first



Diversity

Rich feature diversity

GoLeNet (v1)
ImageNet 2014

Inception v2/v3
Factorized Convs

Inception-ResNet
Skip Connections

Modern Influence
EfficientNet, NAS