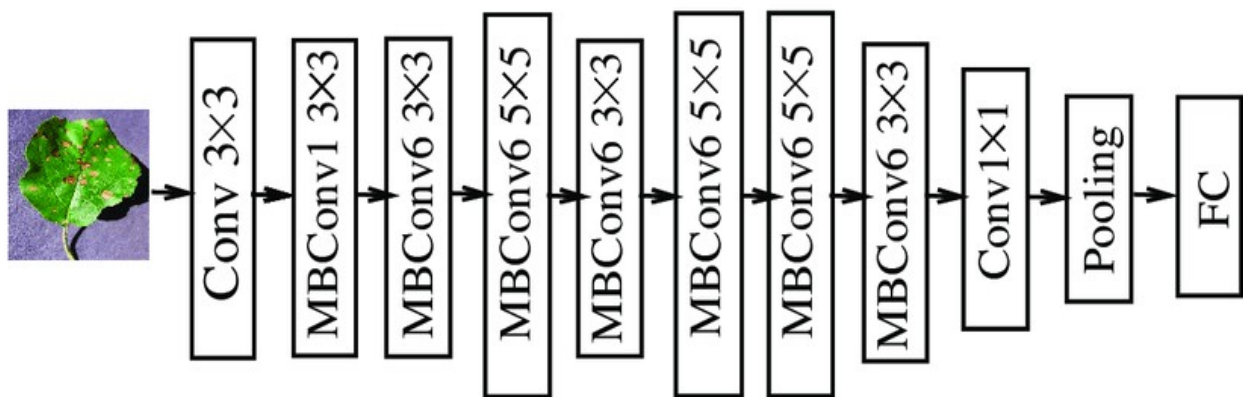# CNN After 2017

## EfficientNet (2019) :

 EfficientNet was created by Google AI which has been introduced compound scaling, balancing width, depth, and resolution.

## Architecture :

- Uses **MBConv layers** (from MobileNet) instead of standard convolutions.
- Depthwise separable convolutions for efficiency.
- Achieves **better accuracy with fewer parameters** than ResNet.
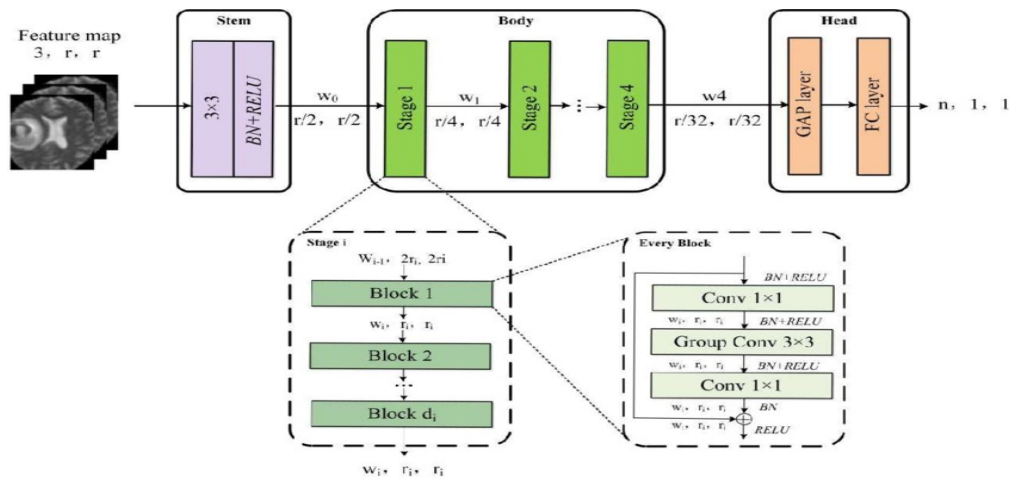
## Block Diagram :



## RegNet (2020) :

 RegNet was created by facebook AI,Uses structured search method to automatically generate CNN Architectures.

## Architecture :

- Stage-wise design with variable depths and widths.
- Optimized group convolutions for efficiency.
- Performs better than ResNet on ImageNet with fewer FLOPs.

## Block Diagram :



# CoAtNet (2021) :

CoAtNet was created by google brain which is hybrid model combining CNNs and transformers

## Architecture :

- Uses convolution layers for **local feature extraction**.
- Uses Transformer layers for **global attention**.
- Achieves superior performance on ImageNet.

## Block Diagram :