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| **Network** | **Pros** | **Cons** | **High Level Structure of Algorithm** |
| Resnet | * Addressing the vanishing gradient problem using skip connections * Allowing to have deeper layer neural network. * State of the art performance when it was introduced in 2015 | * Increased complexity * Prone to overfitting | * Convolutional Layers * Residual Blocks |
| DensNet | * Addressing the vanishing gradient problem using direct connection between every layer * Reduce overfitting and improve generalization. * State of the art performance when it was introduced in 2016 | * High memory usage * Prone to overfitting * Model size | * Initial Convolutional Layer * Dense Blocks * Transition Layers |
| VGG | * simple and straightforward architecture * good transfer learning capabilities * competitive performance on various benchmark | * high computational complexity. * huge network, longer training time | * Convolutional Layers * Fully Connected Layers: The VGGNet has three fully connected layers. |
| Inception | * Reduced Computational Complexity * good transfer learning capabilities * perform with good accuracy | * High Computational Requirements * Overfitting Risk * Longer Training Time | * Feature Extraction Part * Classification Part * Inception Modules |