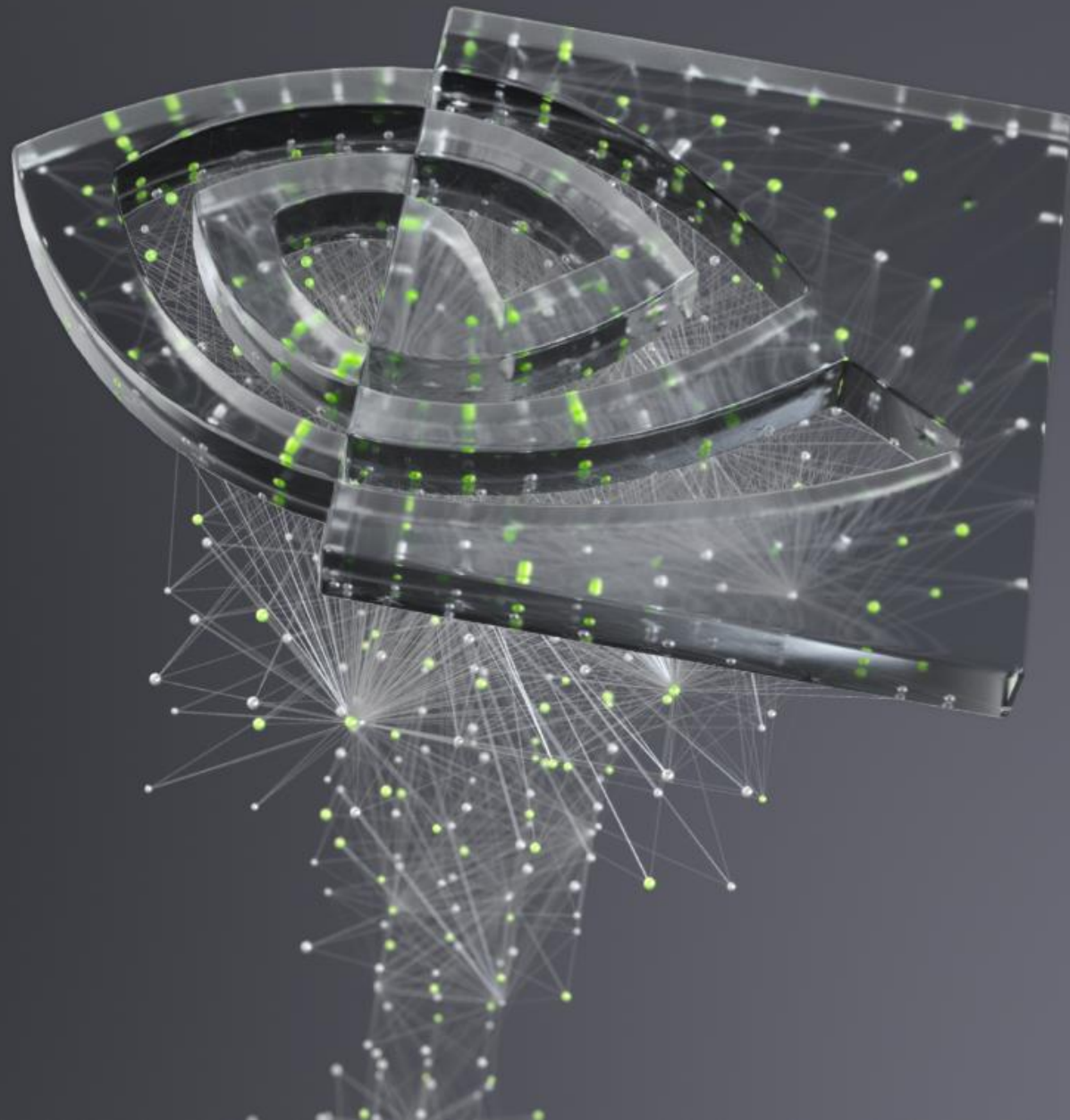




DEEP
LEARNING
INSTITUTE

FUNDAMENTALS OF DEEP LEARNING

Part 5: Pre-trained Models



AGENDA

Part 1: An Introduction to Deep Learning

Part 2: How a Neural Network Trains

Part 3: Convolutional Neural Networks

Part 4: Data Augmentation and Deployment

Part 5: Pre-trained Models

Part 6: Advanced Architectures

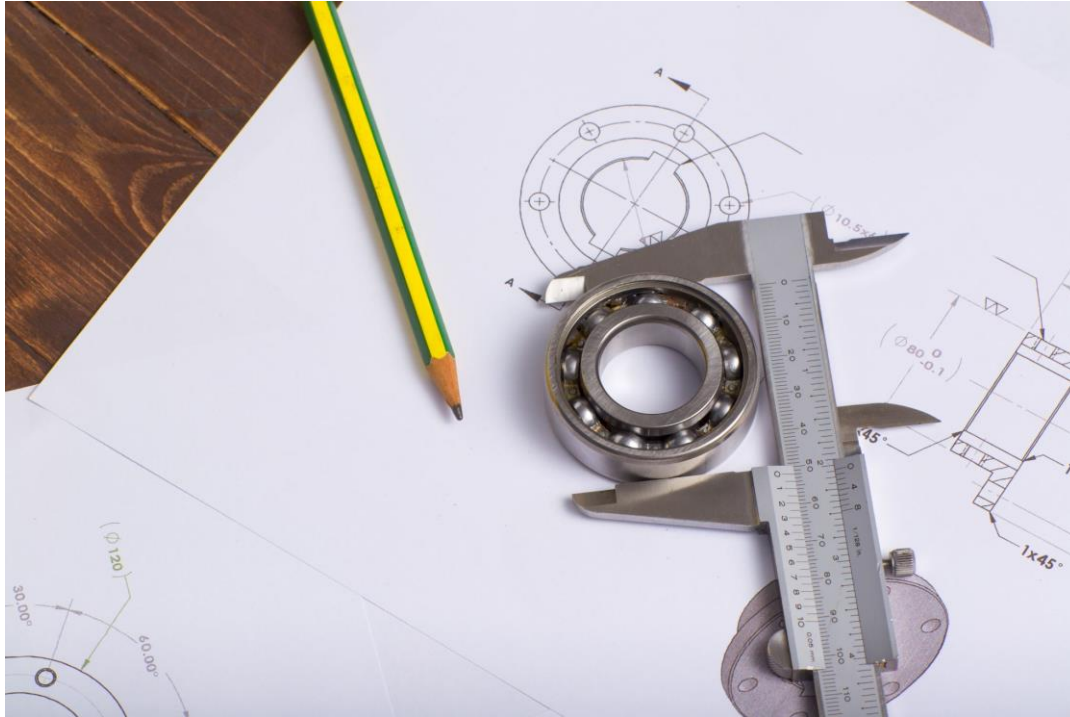
AGENDA – PART 5

- Review so far
- Pre-trained Models
- Transfer Learning



REVIEW SO FAR

REVIEW SO FAR



- Learning Rate
- Number of Layers
- Neurons per Layer
- Activation Functions
- Dropout
- Data



PRE-TRAINED MODELS

PRE-TRAINED MODELS

TensorFlow Hub

 Keras



PYTORCH
HUB

PRE-TRAINED MODELS

VERY DEEP CONVOLUTIONAL NETWORKS FOR LARGE-SCALE IMAGE RECOGNITION

Karen Simonyan* & Andrew Zisserman⁺

Visual Geometry Group, Department of Engineering Science, University of Oxford
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THE NEXT CHALLENGE

An Automated Doggy Door





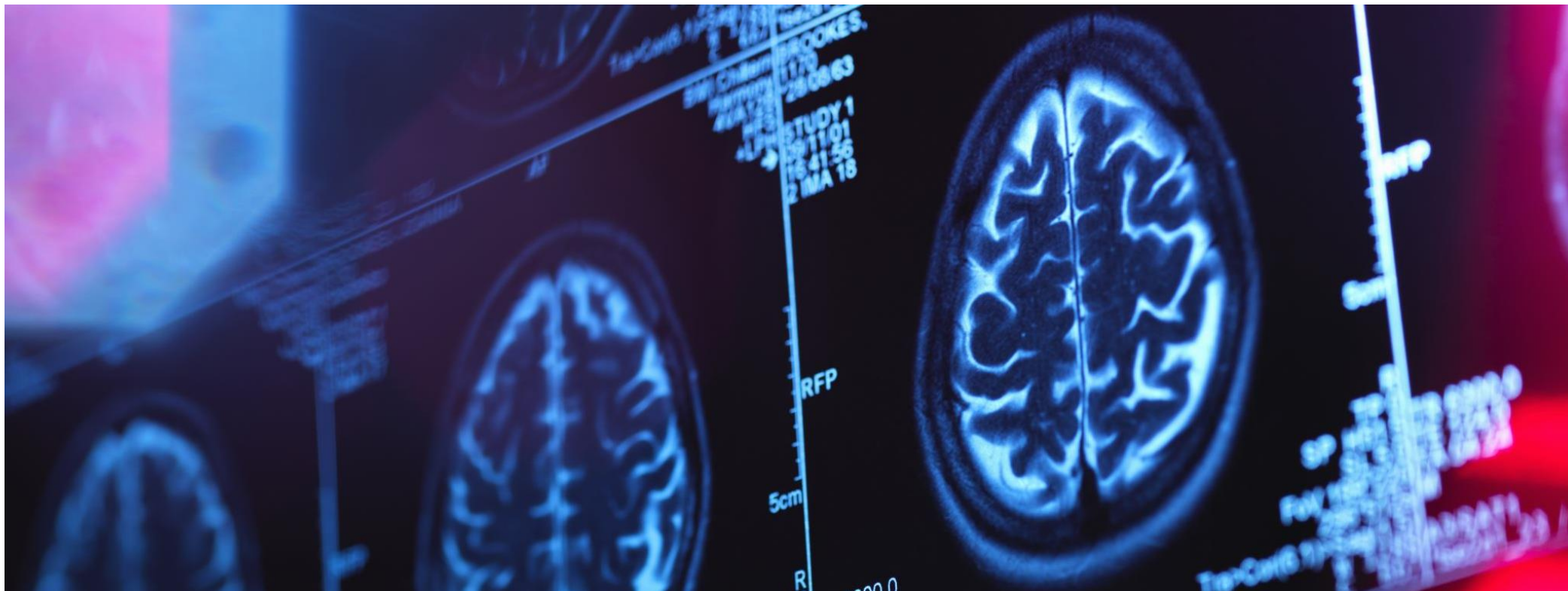
TRANSFER LEARNING

THE CHALLENGE AFTER

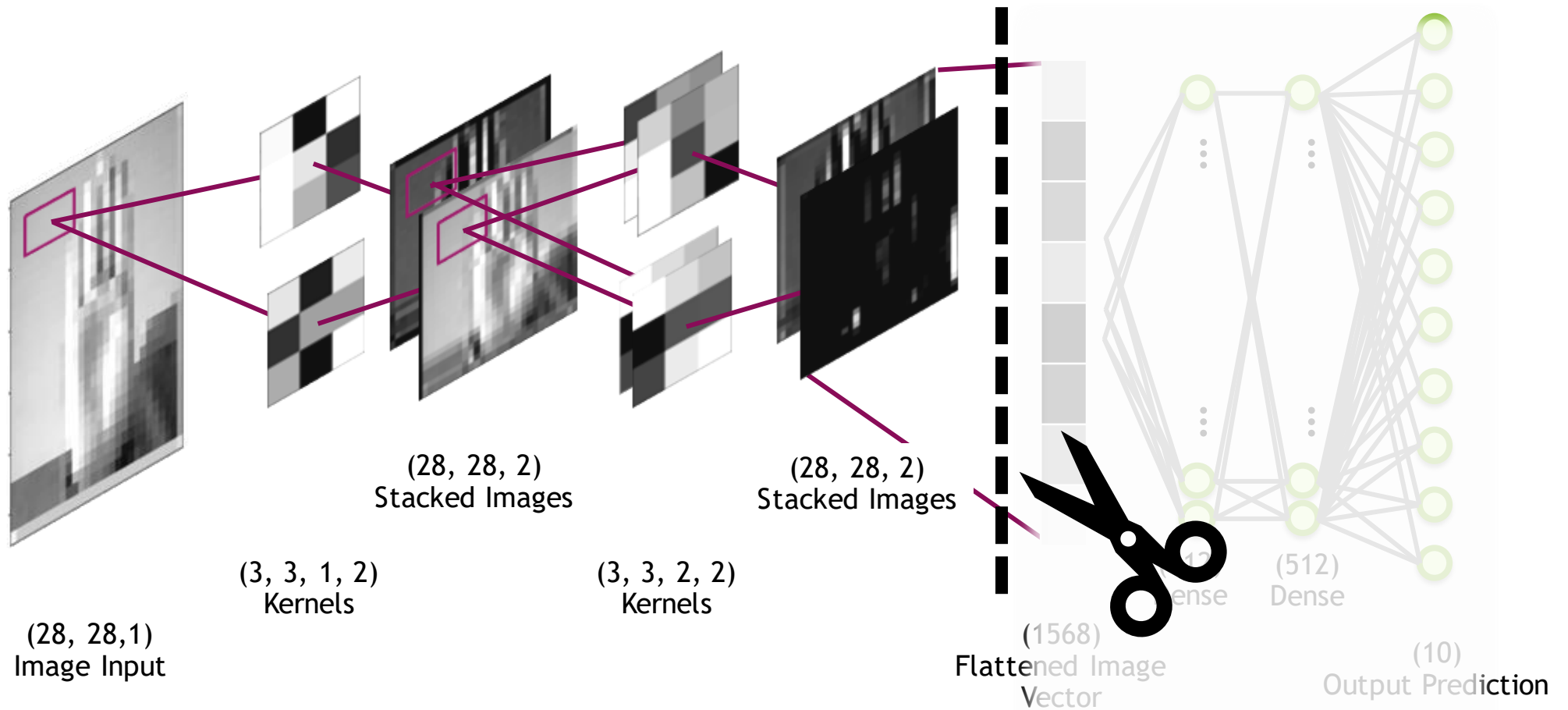
An Automated Presidential Doggy Door



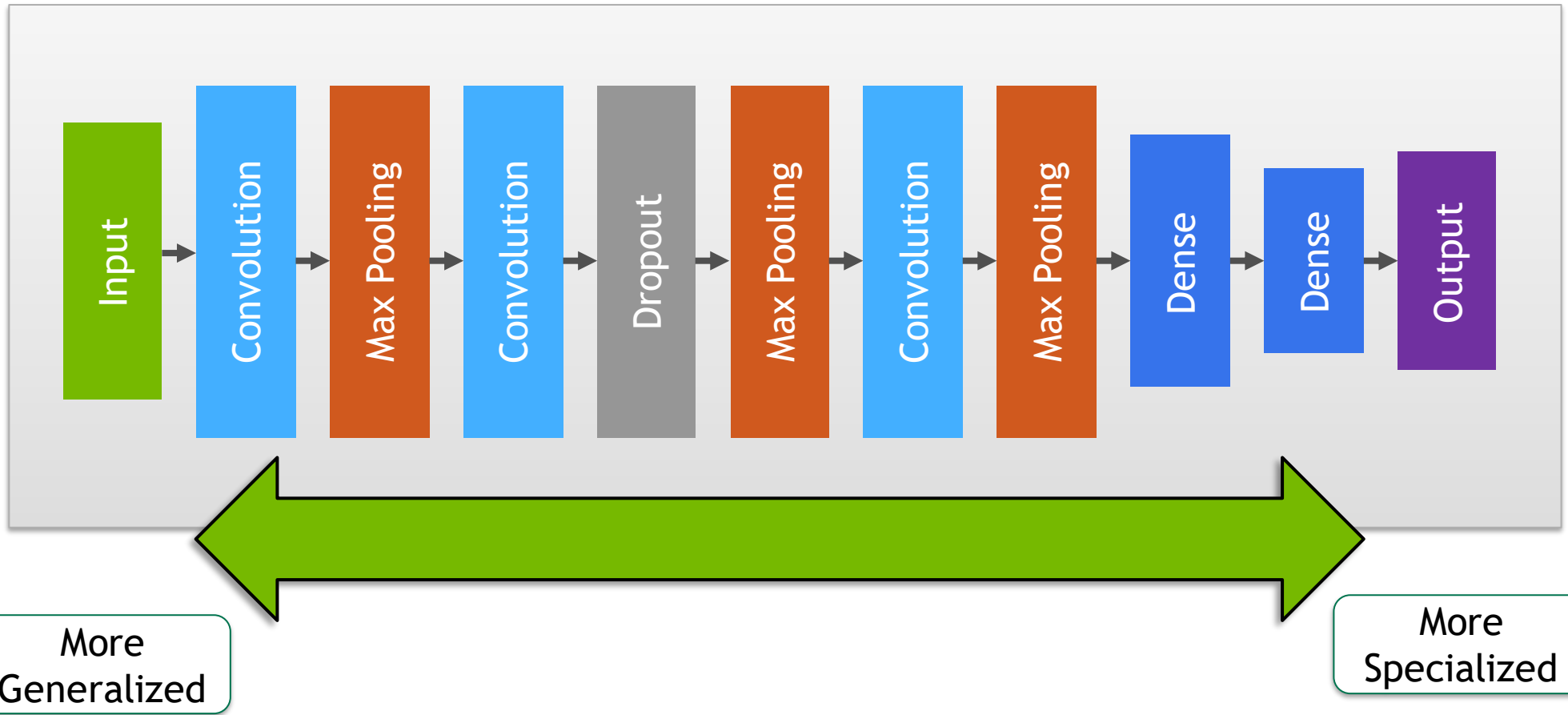
TRANSFER LEARNING



TRANSFER LEARNING



TRANSFER LEARNING

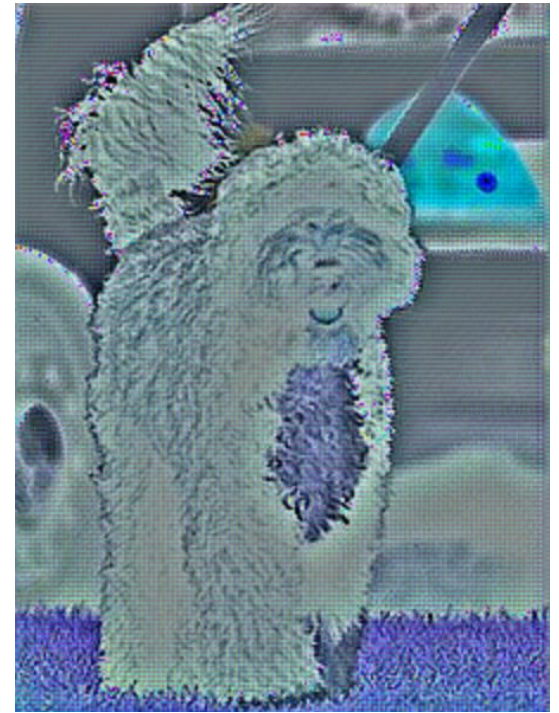


TRANSFER LEARNING

Freezing the Model?



TRANSFER LEARNING





LET'S GET STARTED!



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