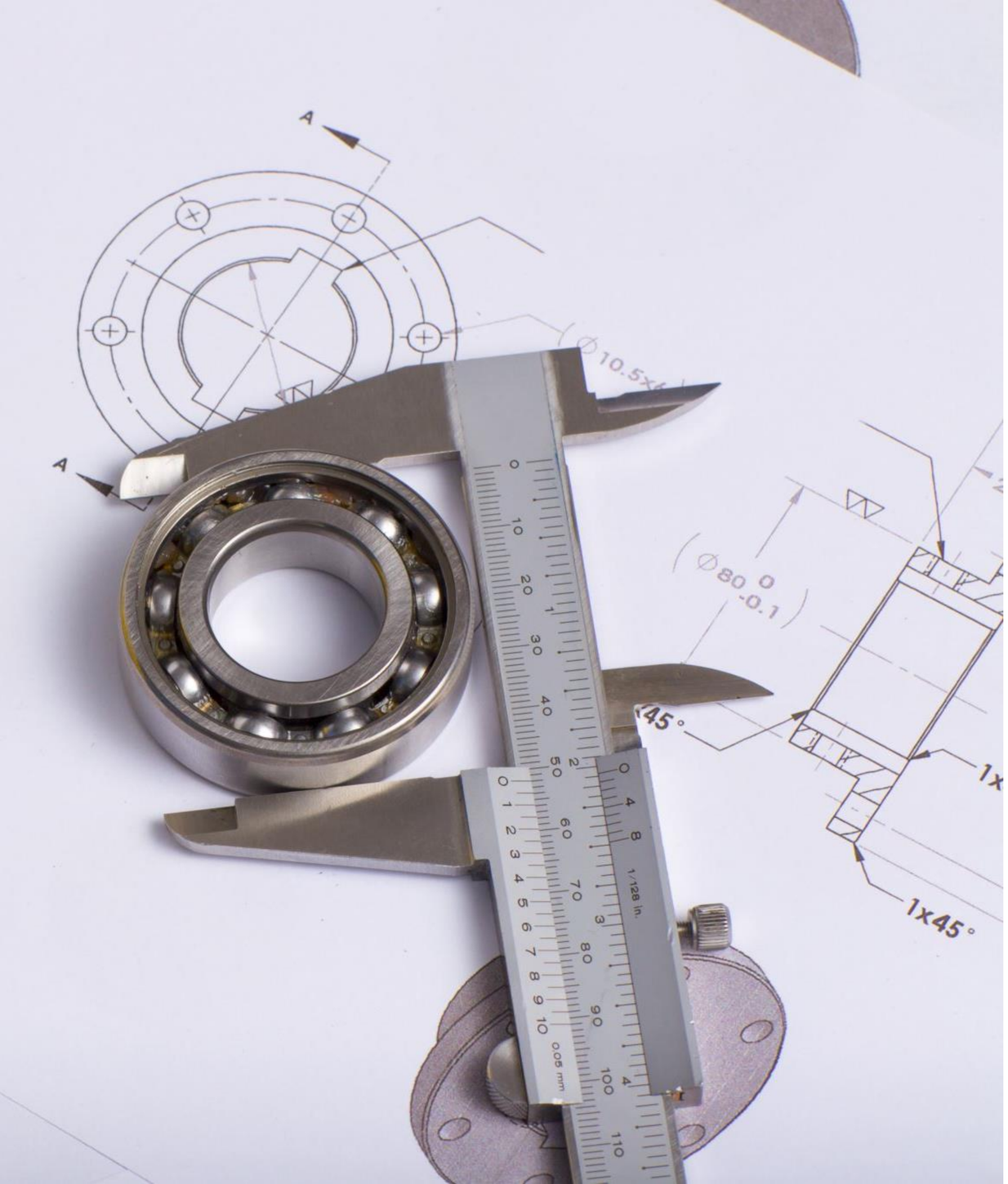
Fundamentals of Deep Learning

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

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

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The Next Challenge

An Automated Doggy Door

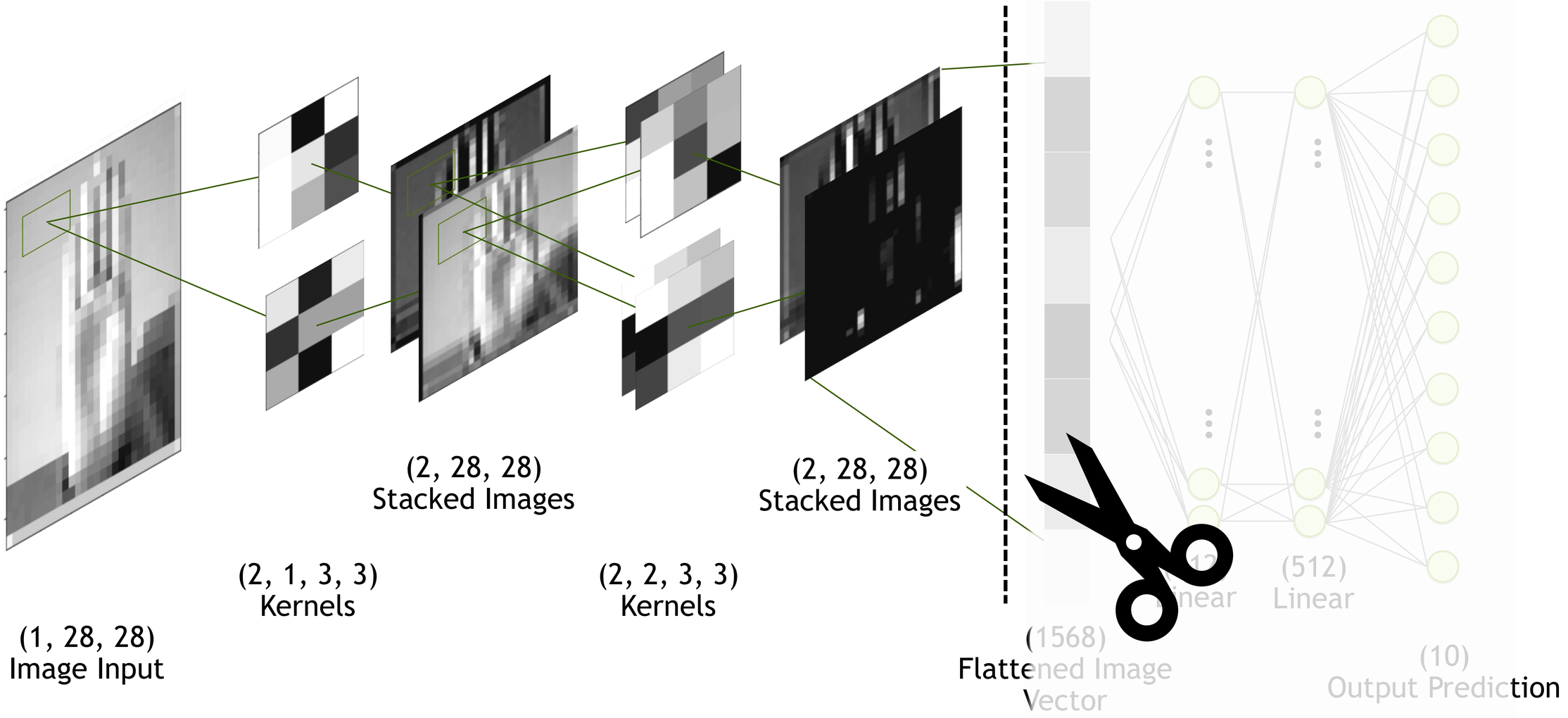
Transfer Learning

The Challenge After

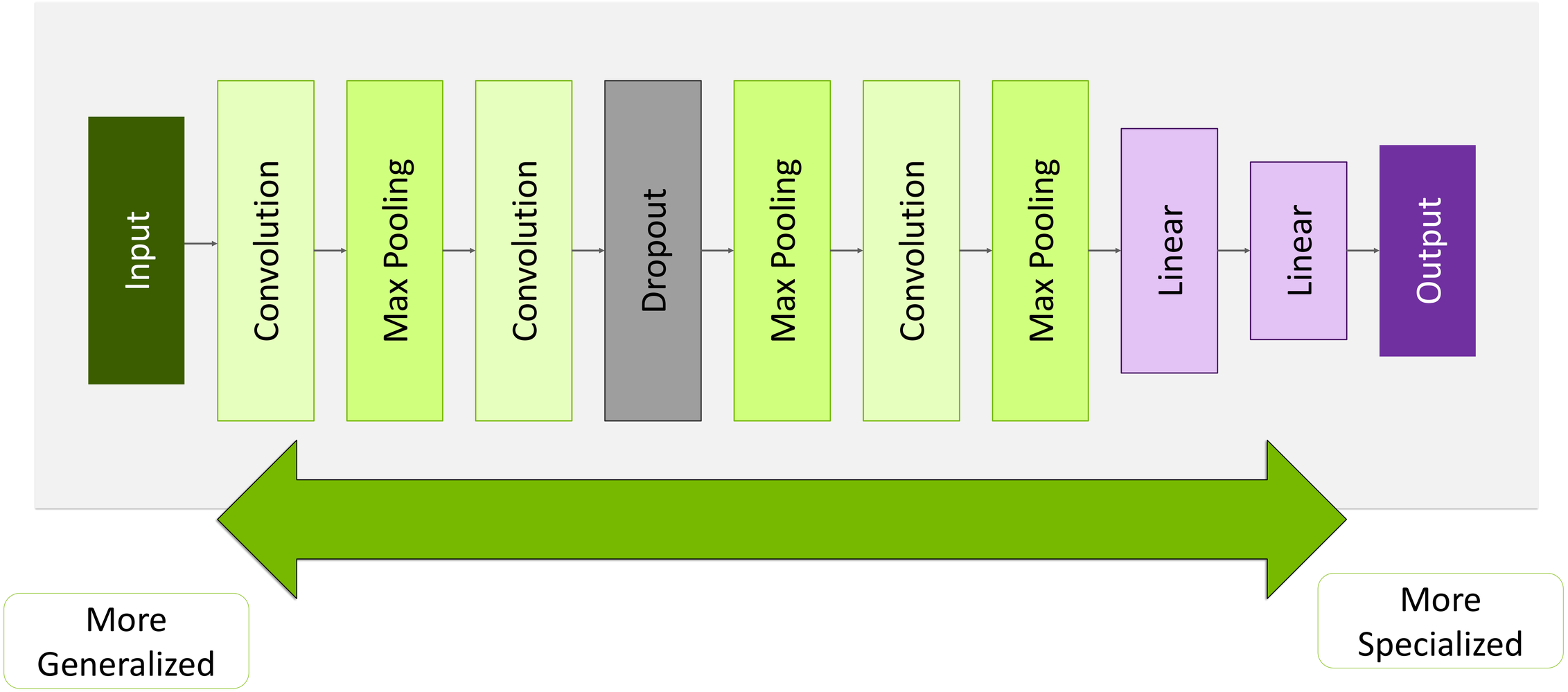
An Automated Presidential Doggy Door

Transfer Learning

Transfer Learning



Transfer Learning



Transfer Learning

Freezing the Model?

Transfer Learning

Let’s Get Started!