Fundamentals of Deep Learning

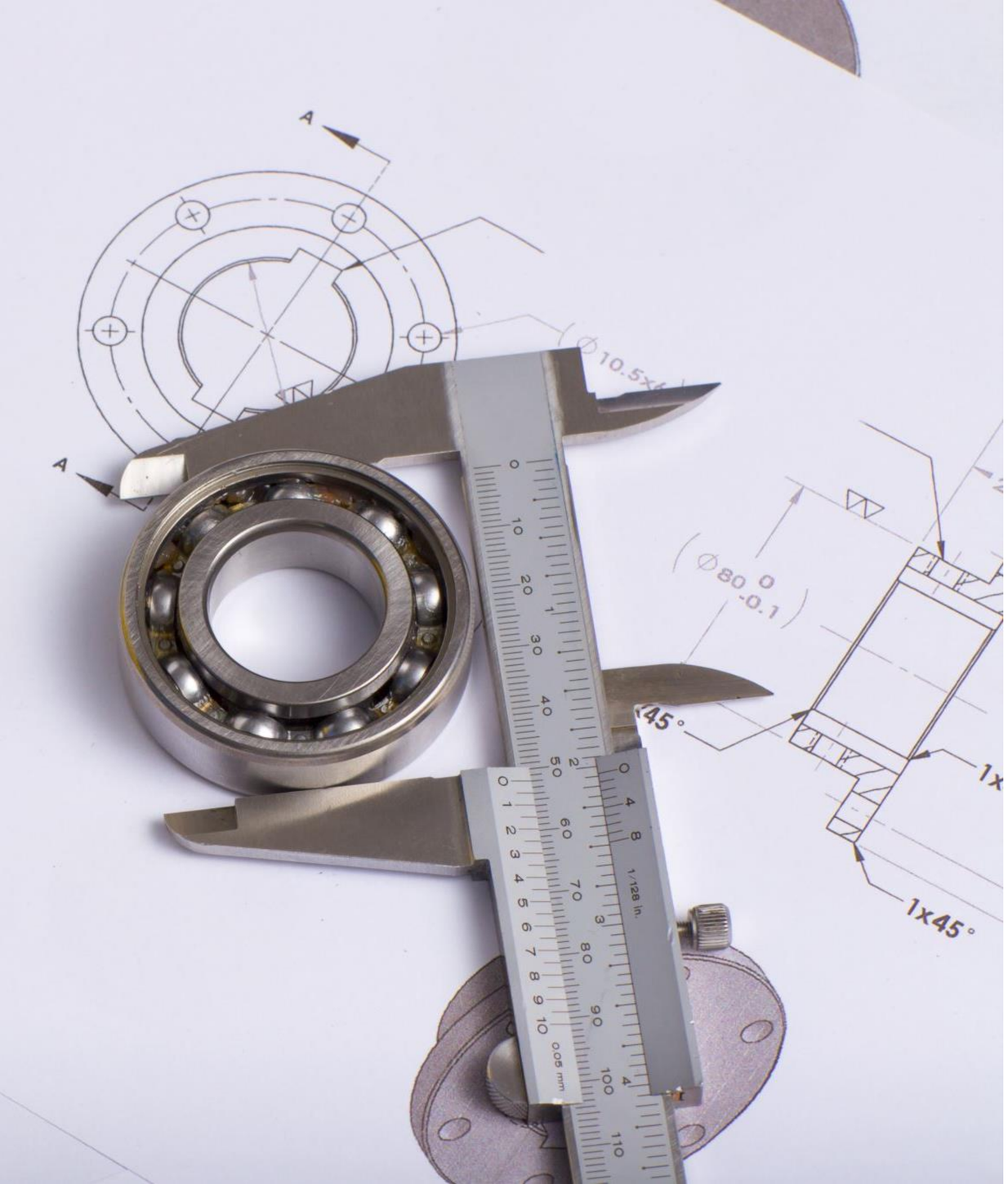
Part 5: Pre-trained Models

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

NVIDIA.

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

NVIDIA NGC

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

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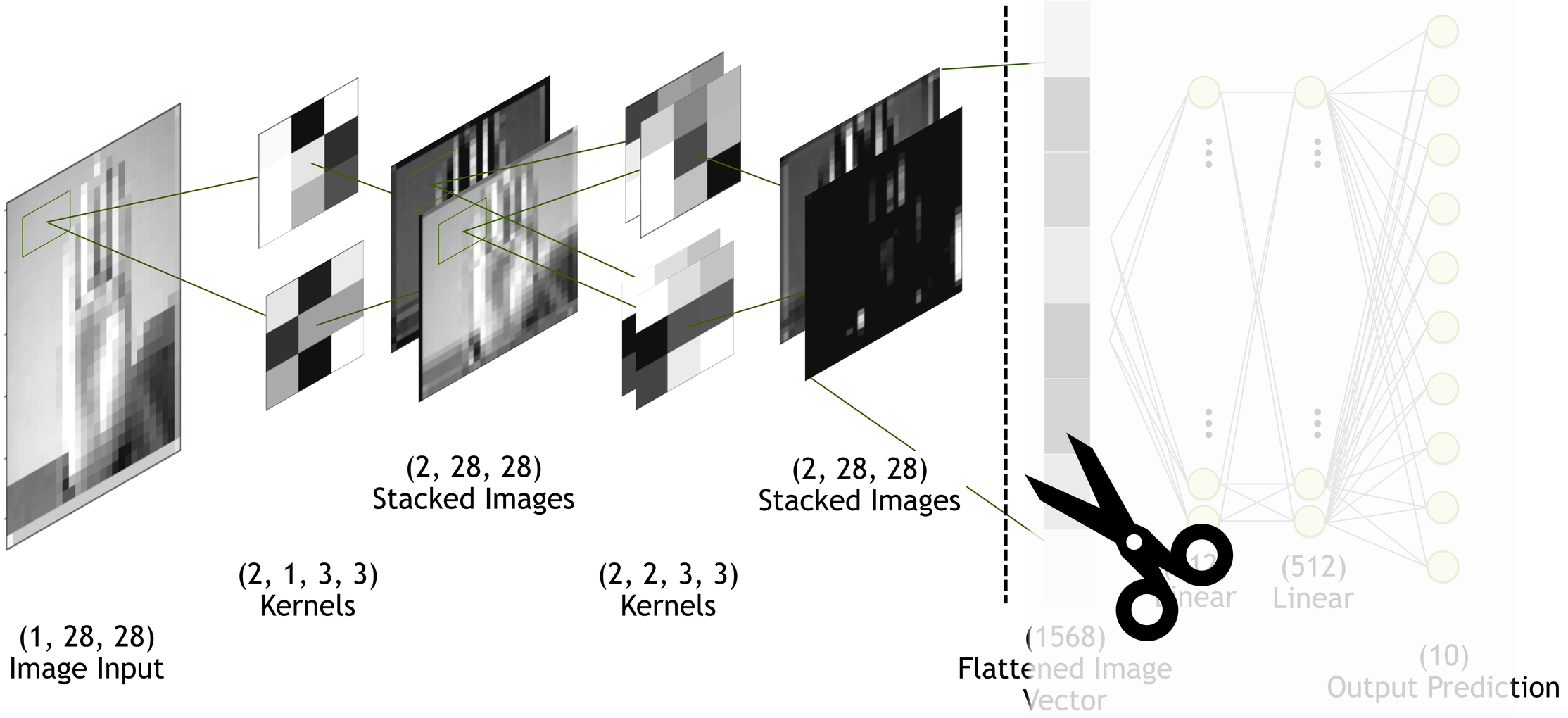
Transfer Learning

The Challenge After

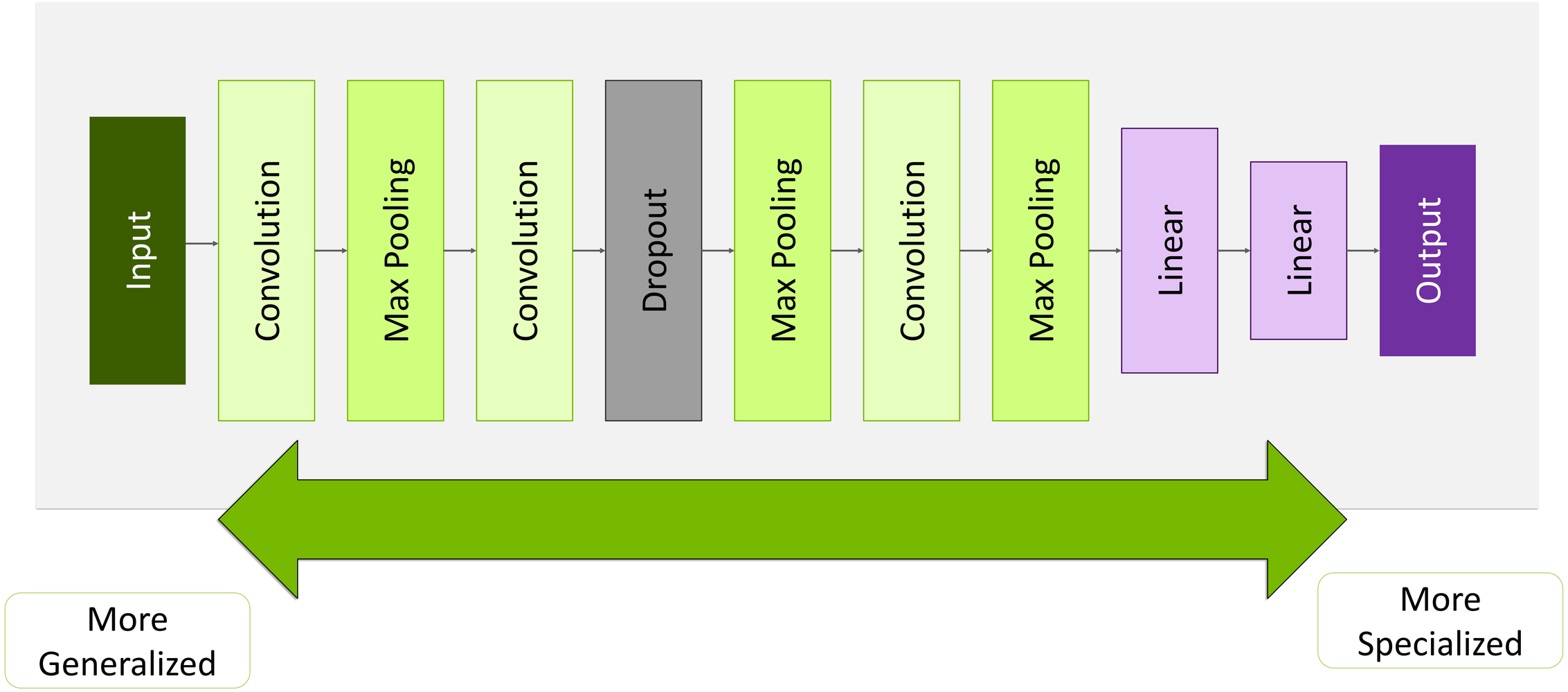
An Automated Presidential Doggy Door

Transfer Learning

Transfer Learning



Transfer Learning



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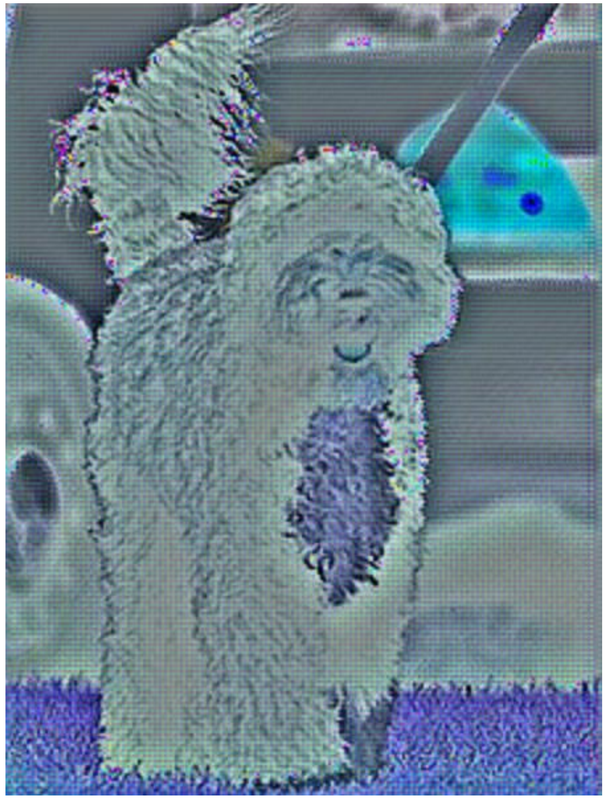
Transfer Learning

Freezing the Model?

Transfer Learning



Let’s Get Started!