



ADC Applaudo
Developers
Conference
2020



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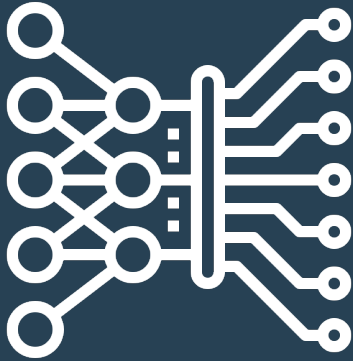
Getting Started with CoreML

Are you ready to start making your apps more powerful by implementing Machine Learning models?



Agenda

1. Introduction
2. What is CoreML?
3. Code Sample



ML

Is the study of computer algorithms that improve automatically through experience. Is an application of the AI in which a computer can learn from data.

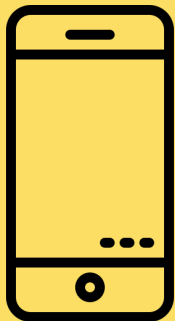
“The field of study that gives computers the ability to learn without being explicitly programmed.”

– Arthur Samuel

CoreML

An Apple's framework to integrate machine learning models into your applications

Runs
On-Device



Manage
Performance

Don't need to be
an expert on ML



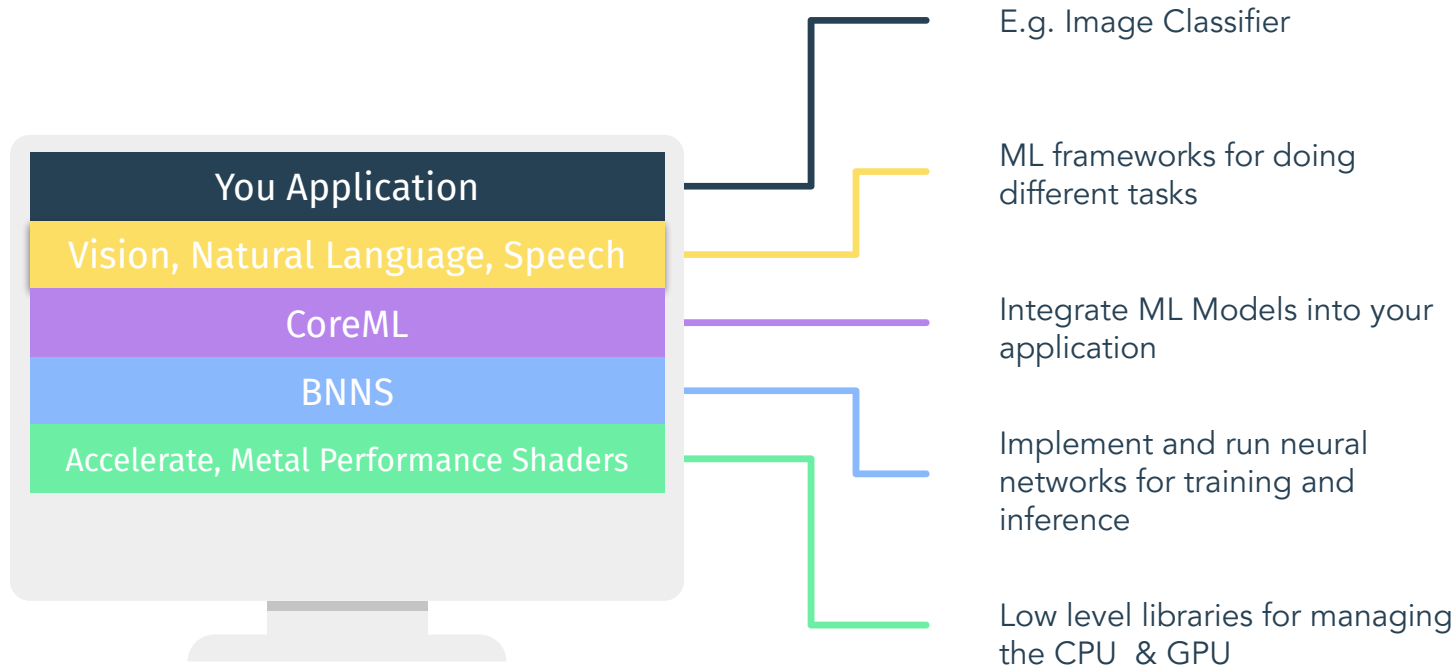


- Inference takes place on server
- Easiest as sending an HTTP Request
- Don't care about servers maintenance

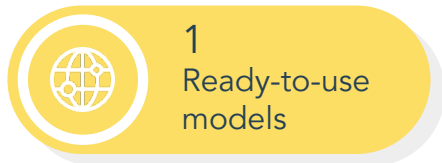


- Reduce latency
- Doesn't expose user's data
- Great for real time inference

CoreML Performance Management



Integrating an ML Model into your App




Ready-To-Use Models

Machine Learning

OverviewCore MLCreate MLModelsResources

ImagesText


Images



FCRN-DepthPrediction
Depth Estimation

Predict the depth from a single image.


[View Models](#)



MNIST
Drawing Classification

Classify a single handwritten digit (supports digits 0-9).


[View Model](#)




UpdatableDrawingClassifier
Drawing Classification

Drawing classifier that learns to recognize new drawings based on a K-Nearest Neighbors model (KNN).


[View Model and Code Sample](#)



MobileNetV2
Image Classification



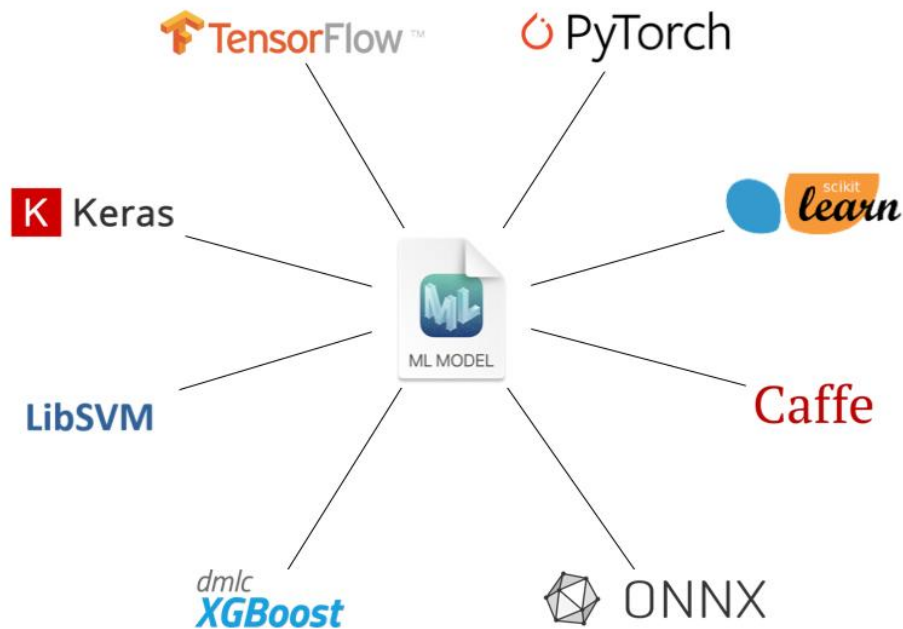
Resnet50
Image Classification



SqueezeNet
Image Classification

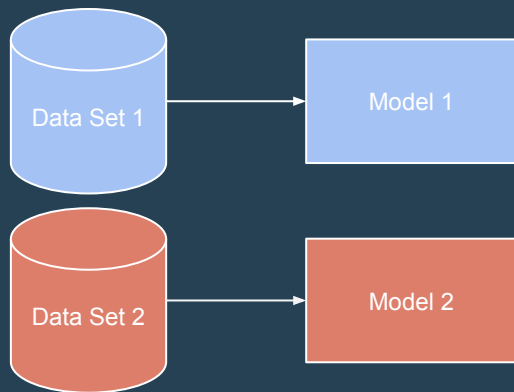
Apple Developer

Convert an Existing Model

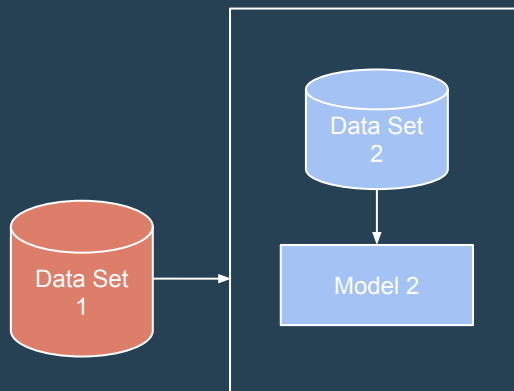


Train Your Model





Machine Learning

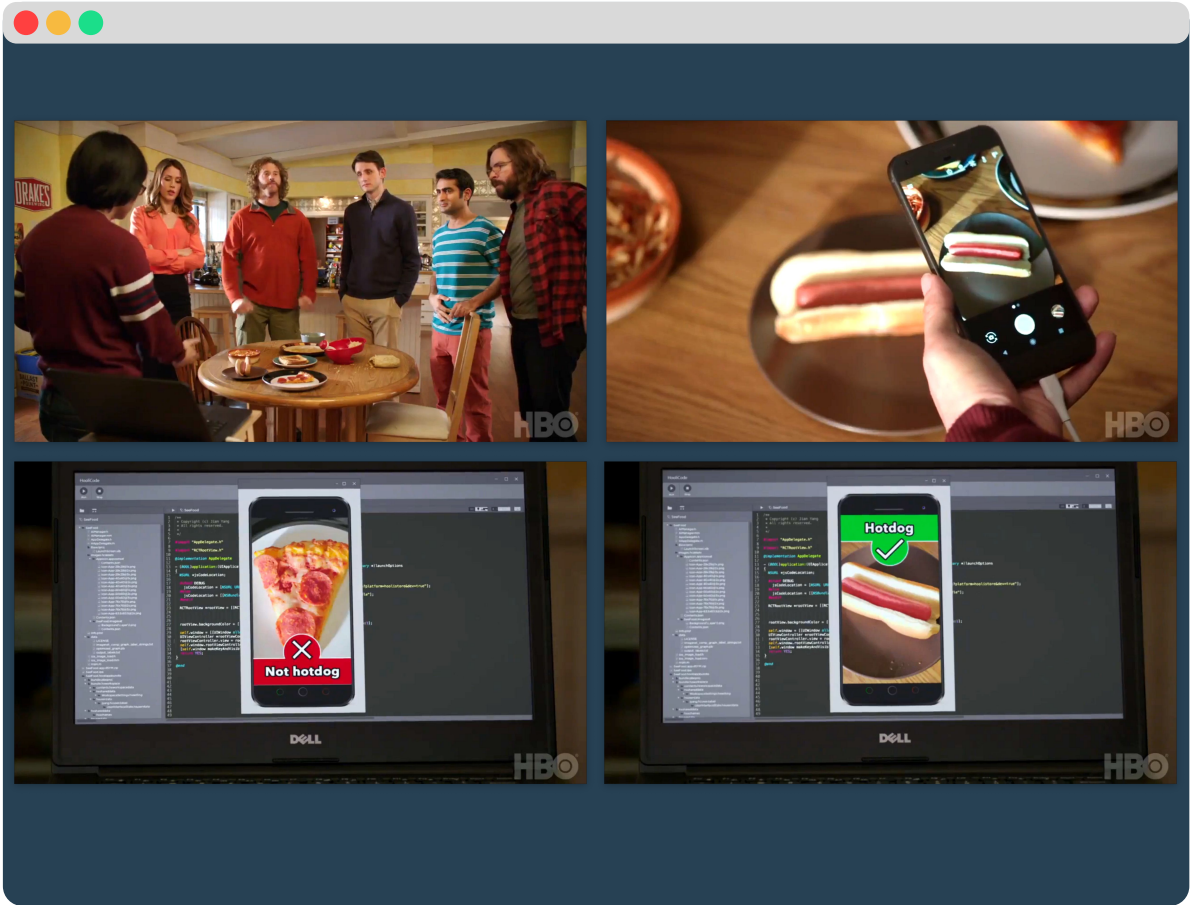


Transfer Learning

Transfer Learning

- Smaller data set
- Adjust the expected output to a Pre-Trained Model
- Reduce training time
- Is cheaper for the CPU

CODE SAMPLE





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