



OpenVINO Toolkit Introduction

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Deep Learning Software Engineer**

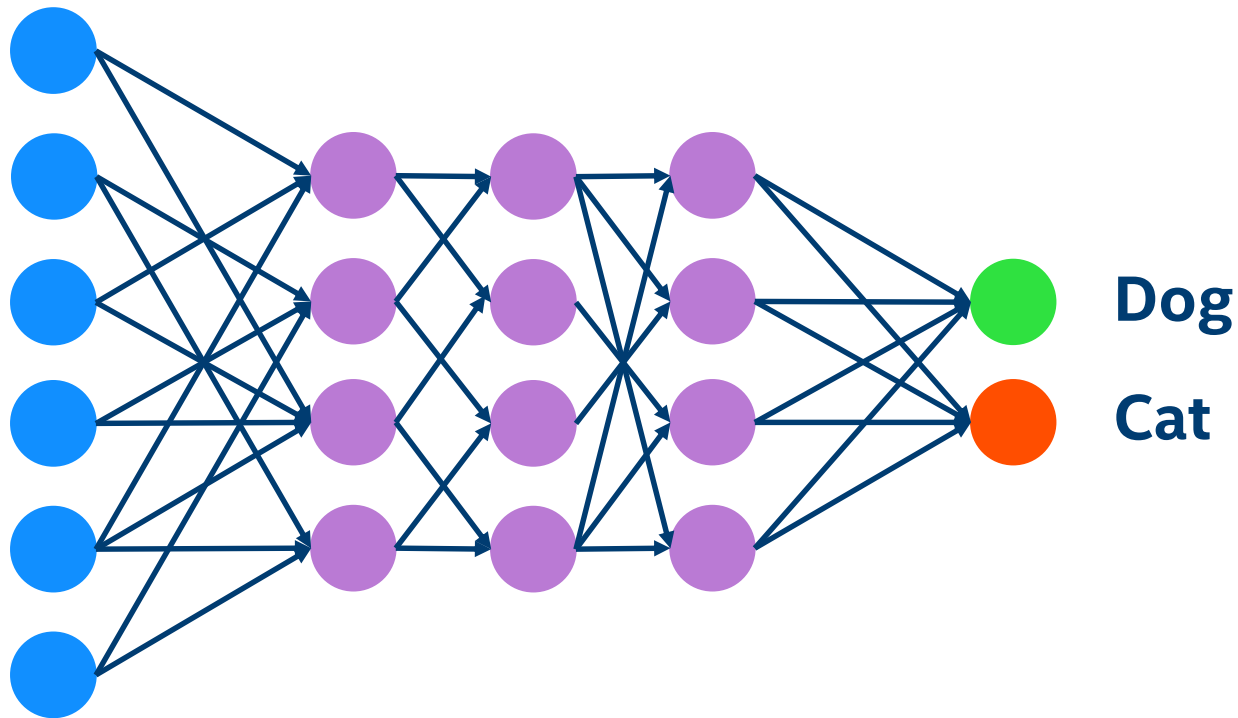
Internet of Things Group

What is OpenVINO Toolkit?

Different applications

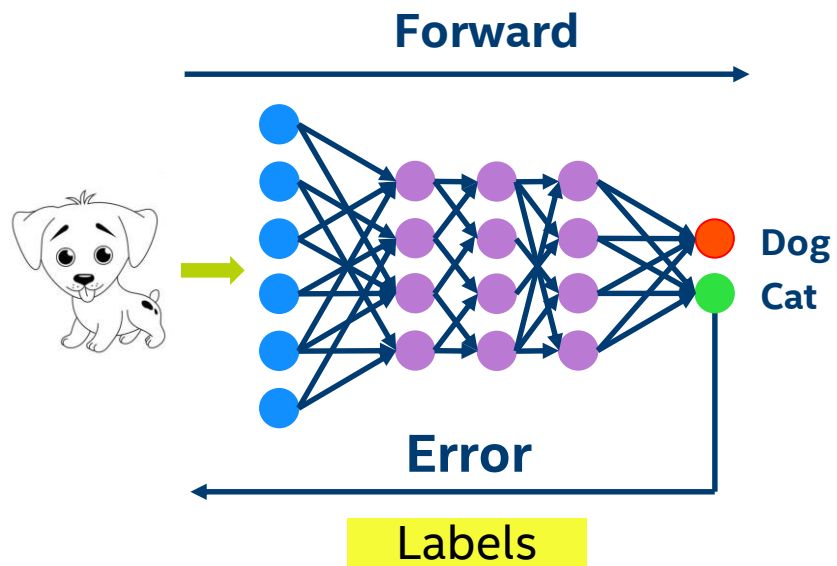
- Solutions for emulate human vision
 - ✓ Convolution neural networks
 - ✓ Traditional computer vision
- Supports heterogeneous execution
 - ✓ CPU, iGPU, FPGA, VPU
- Easy-to-use library of pre-optimized kernels

Deep neural network

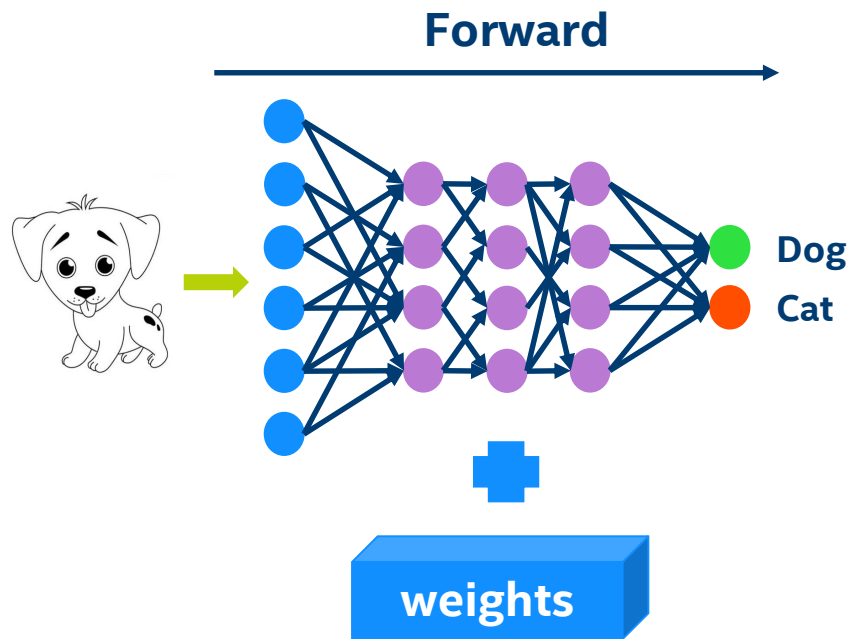


What can be done with DNN?

Learning

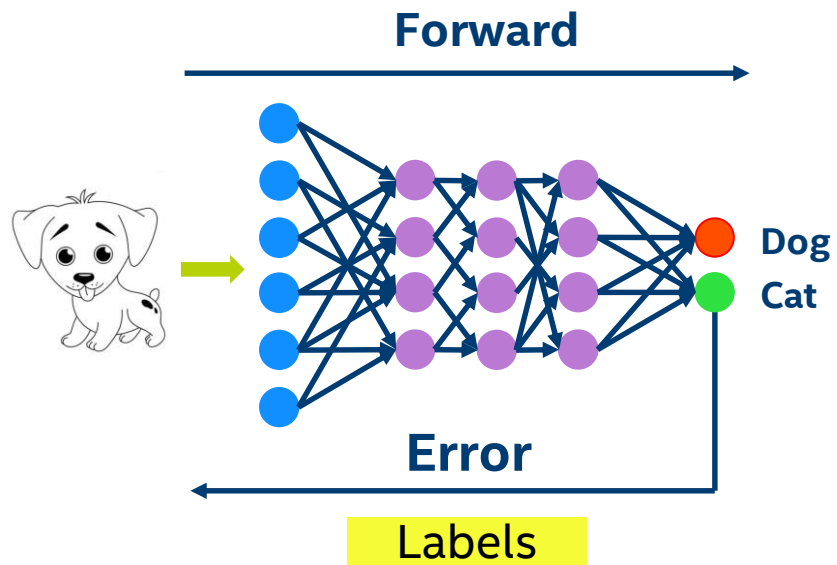


Inference

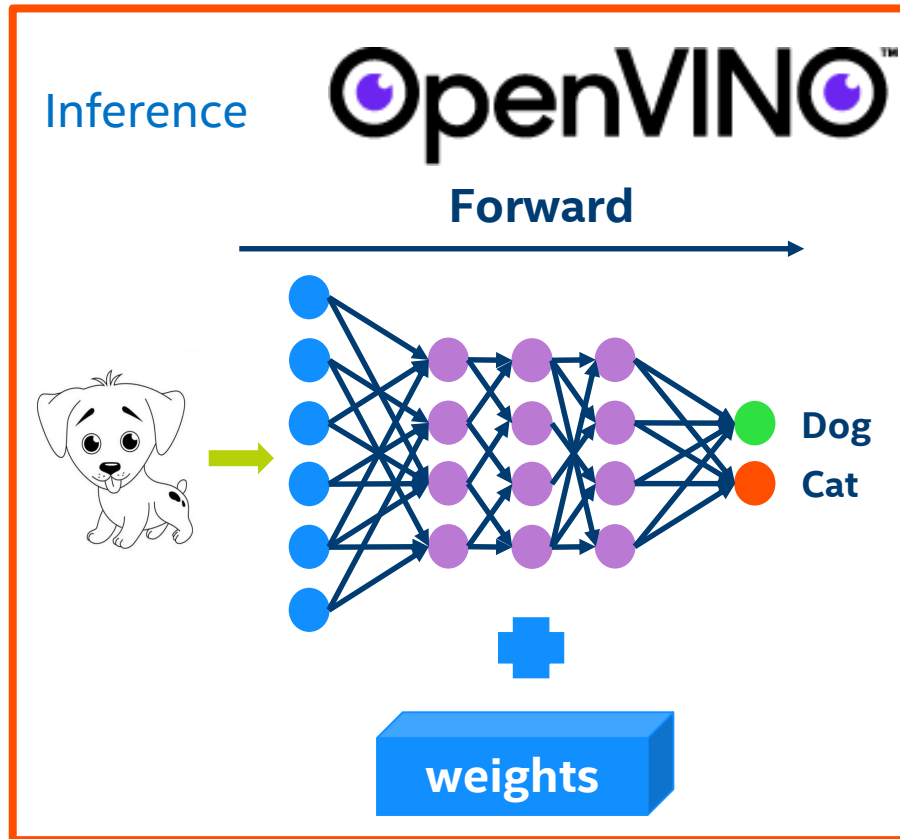


What can be done with DNN?

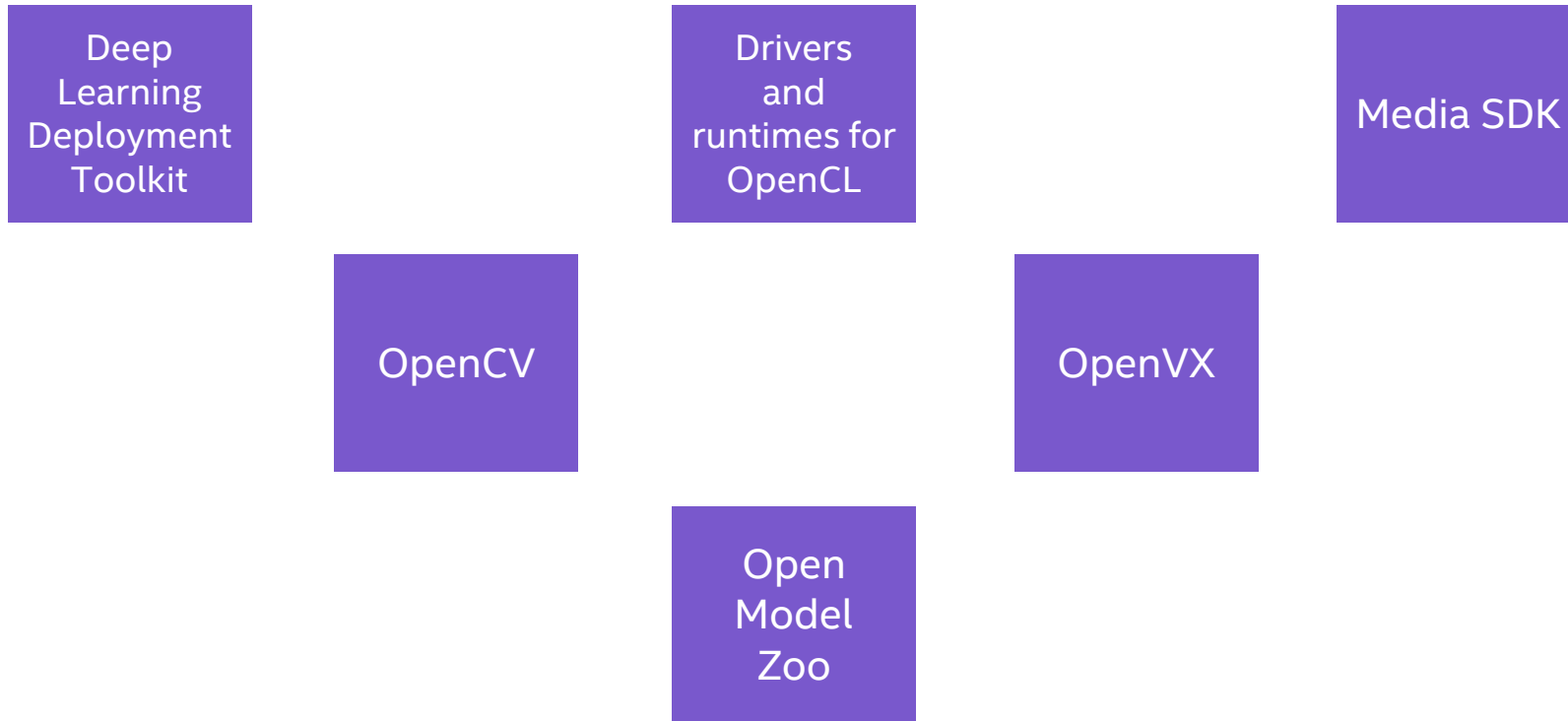
Learning



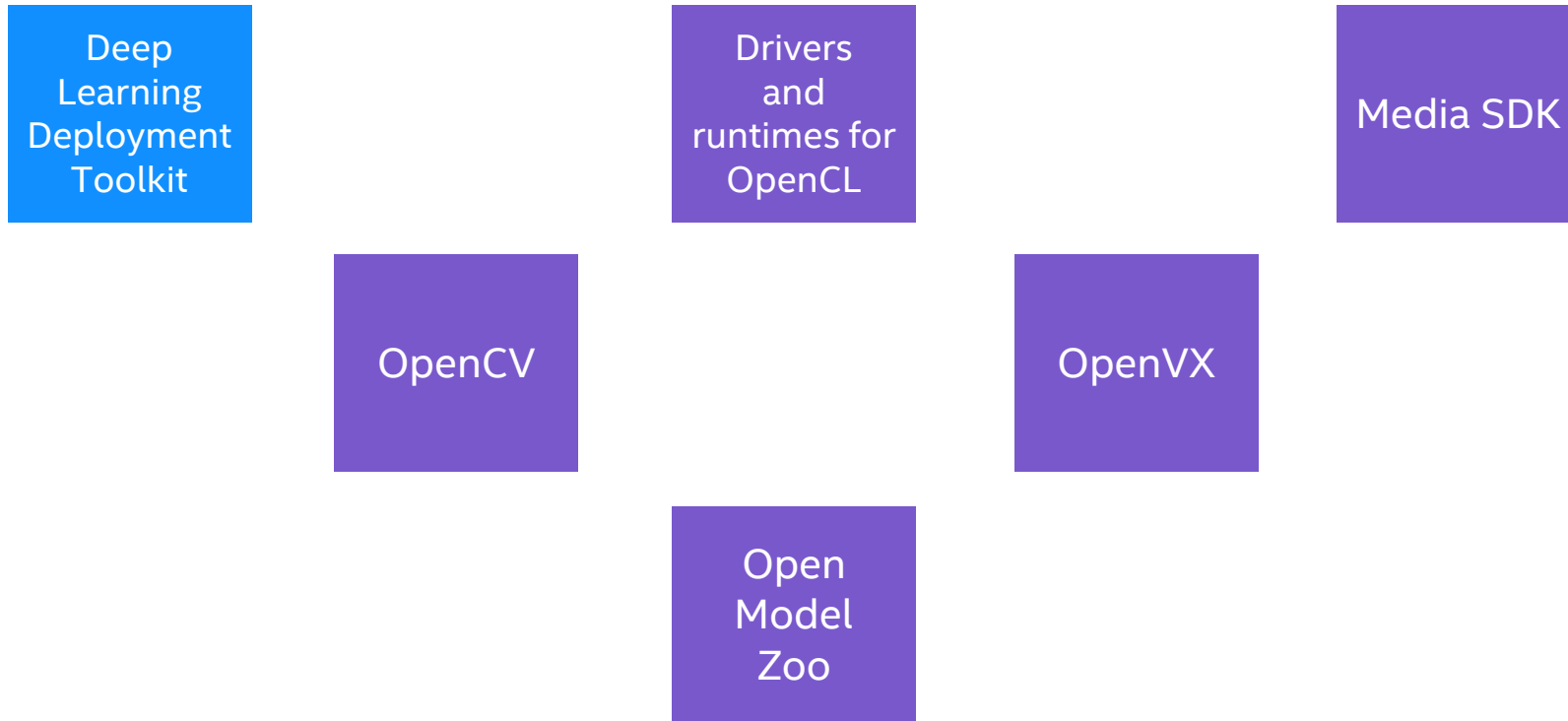
Inference



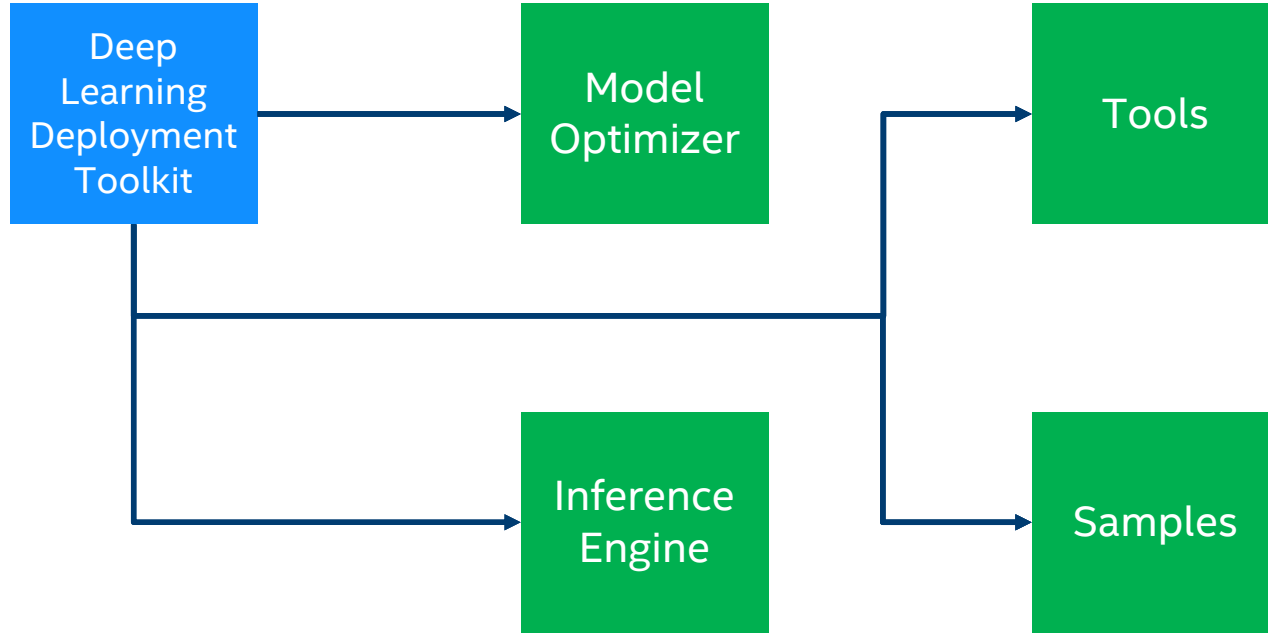
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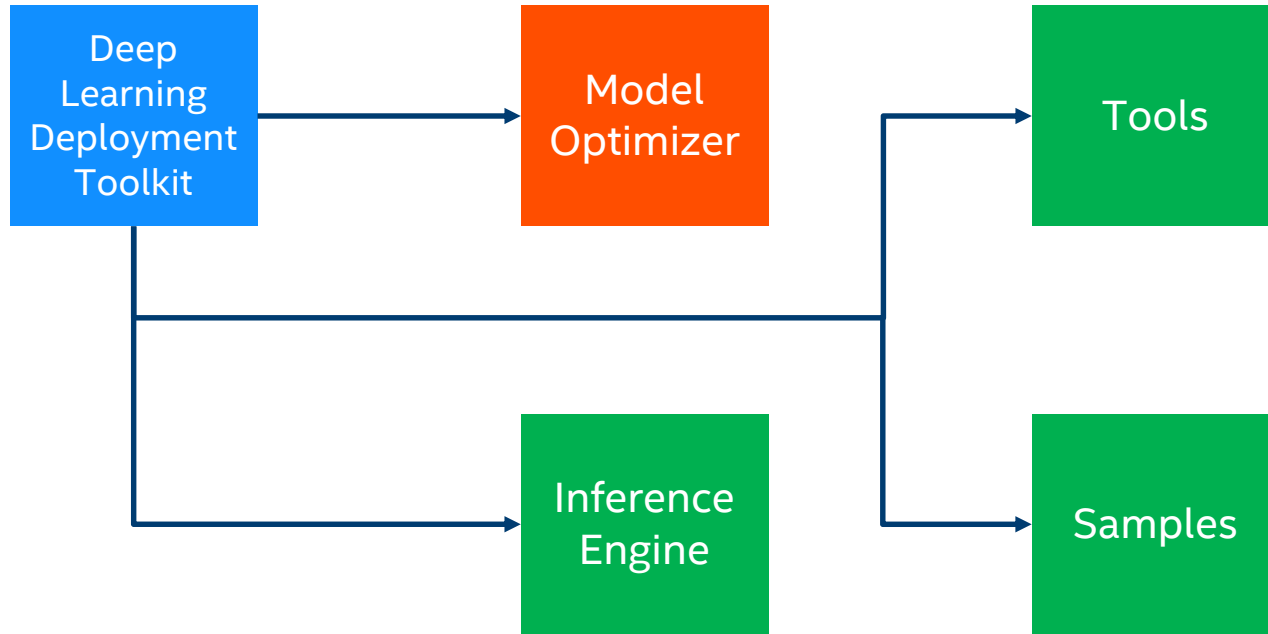
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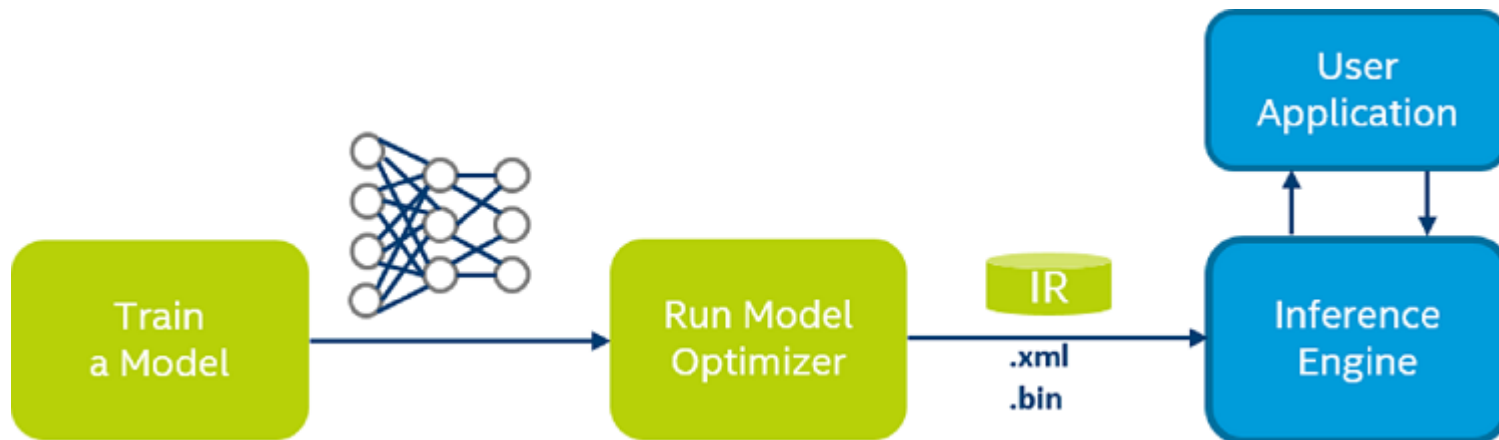


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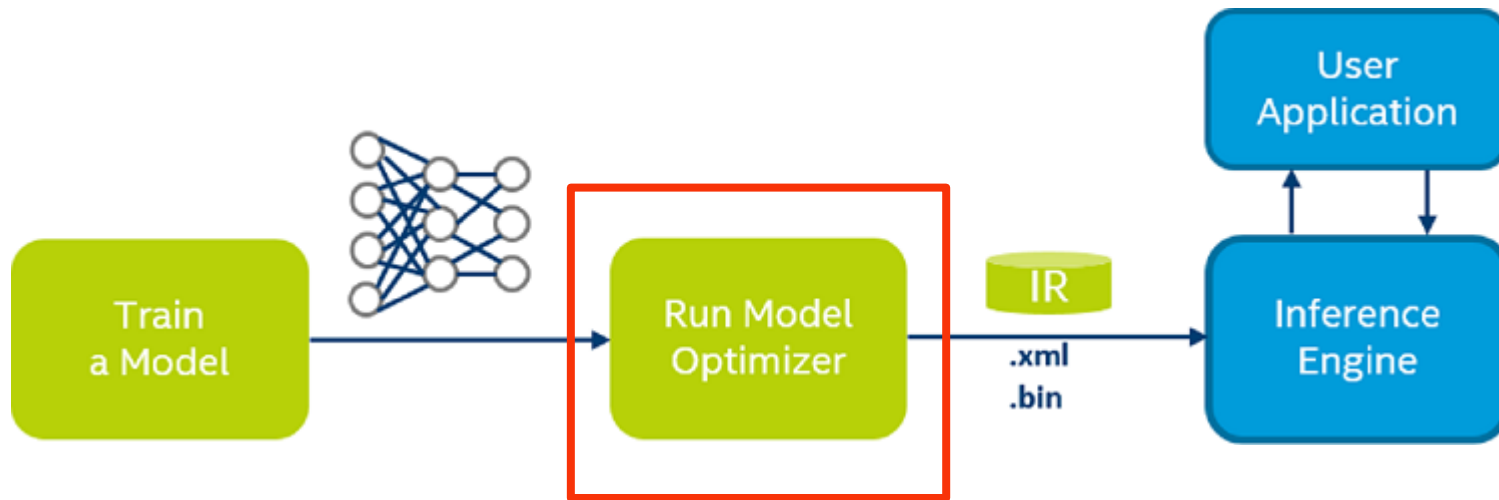
Model Optimizer

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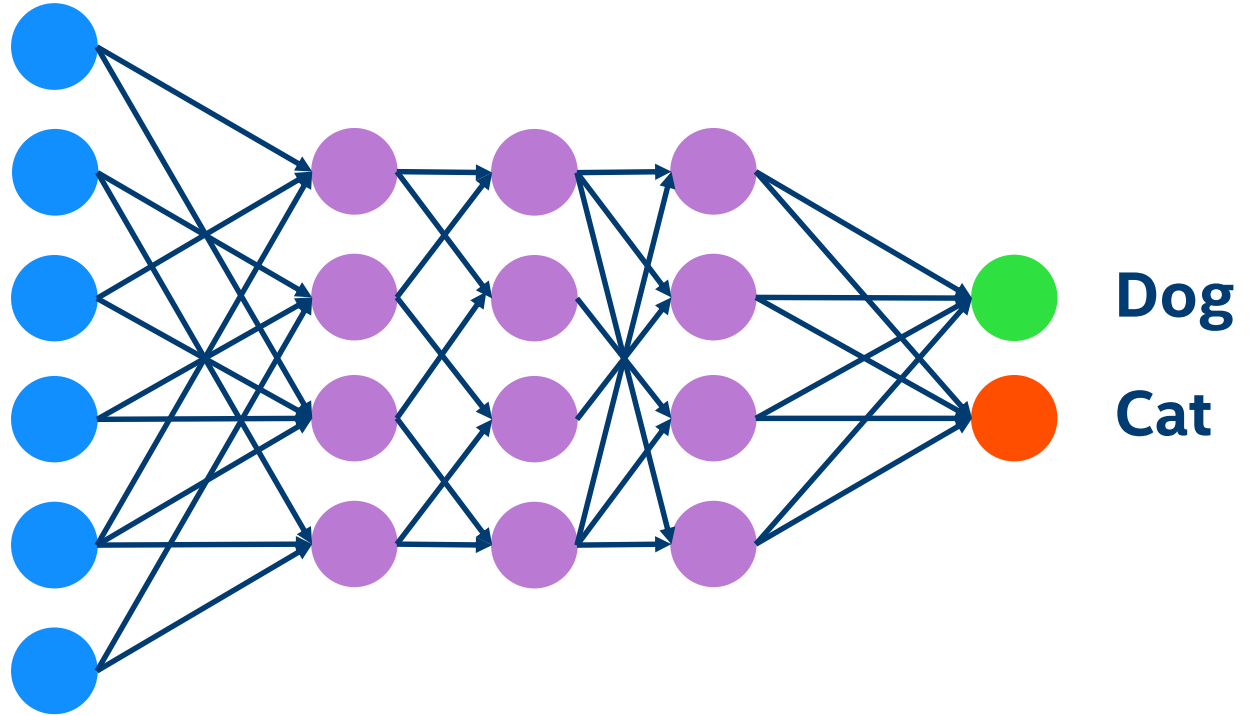


Model Optimizer

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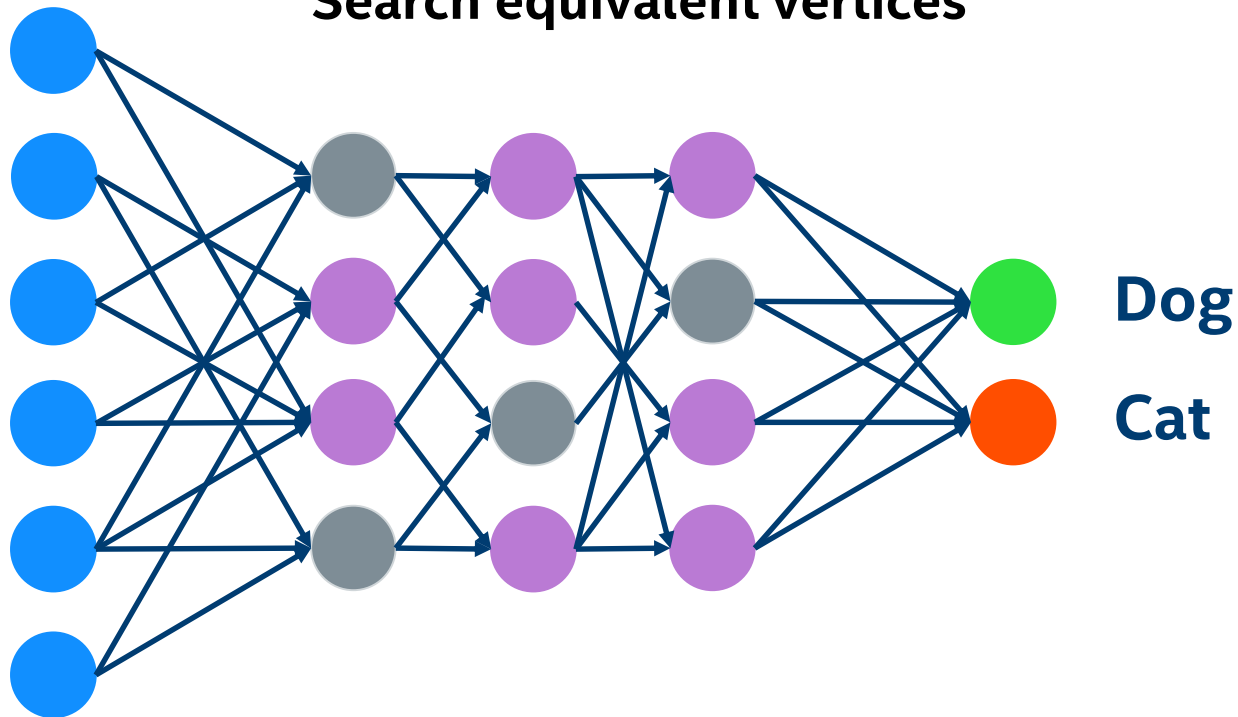


Model
Optimizer



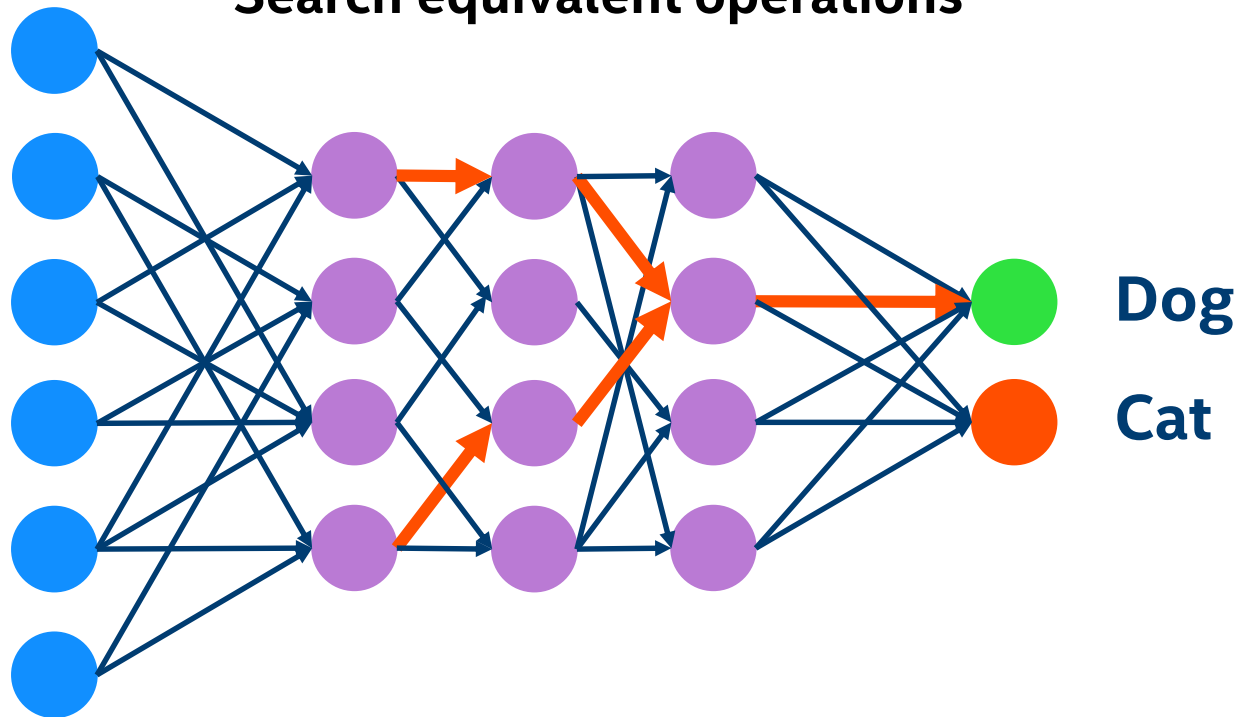
Model
Optimizer

Search equivalent vertices



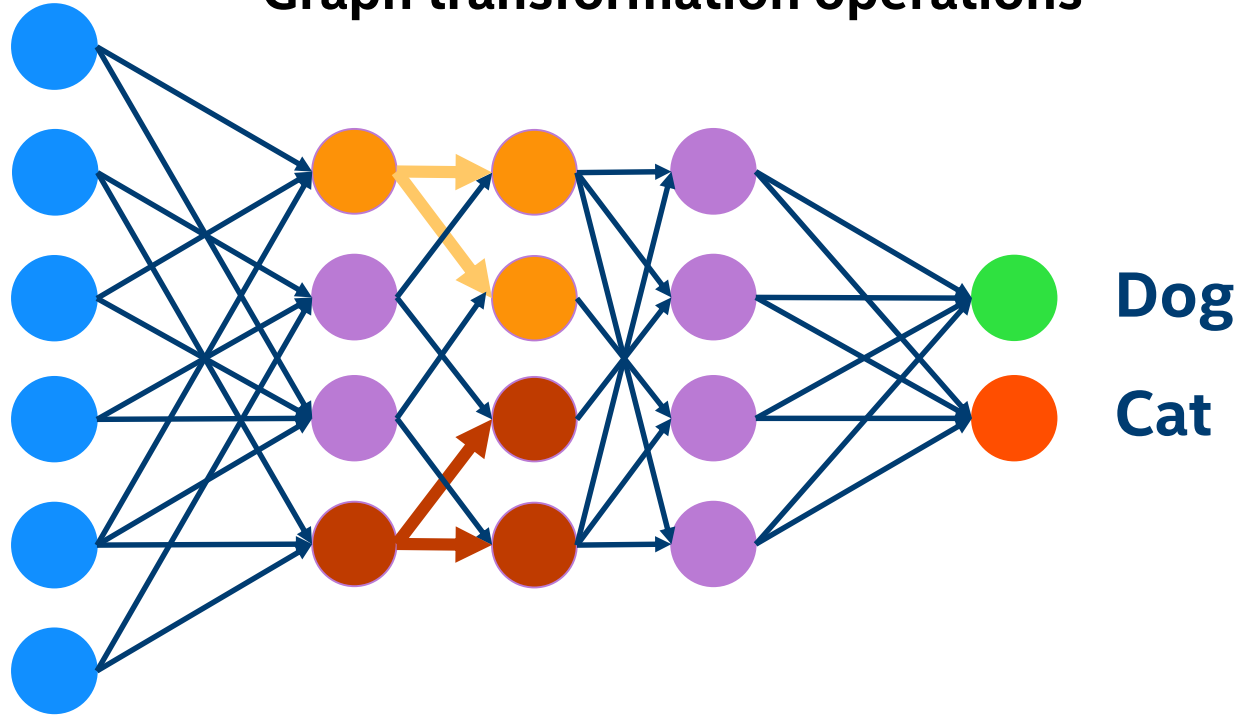
Model
Optimizer

Search equivalent operations

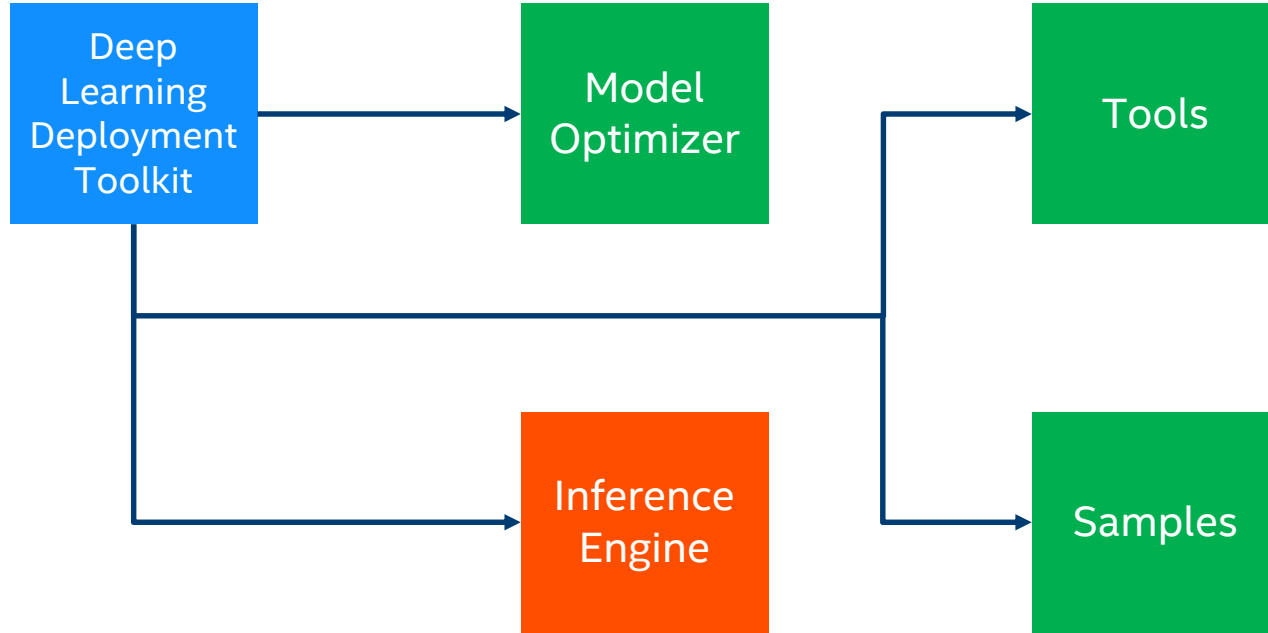


Model
Optimizer

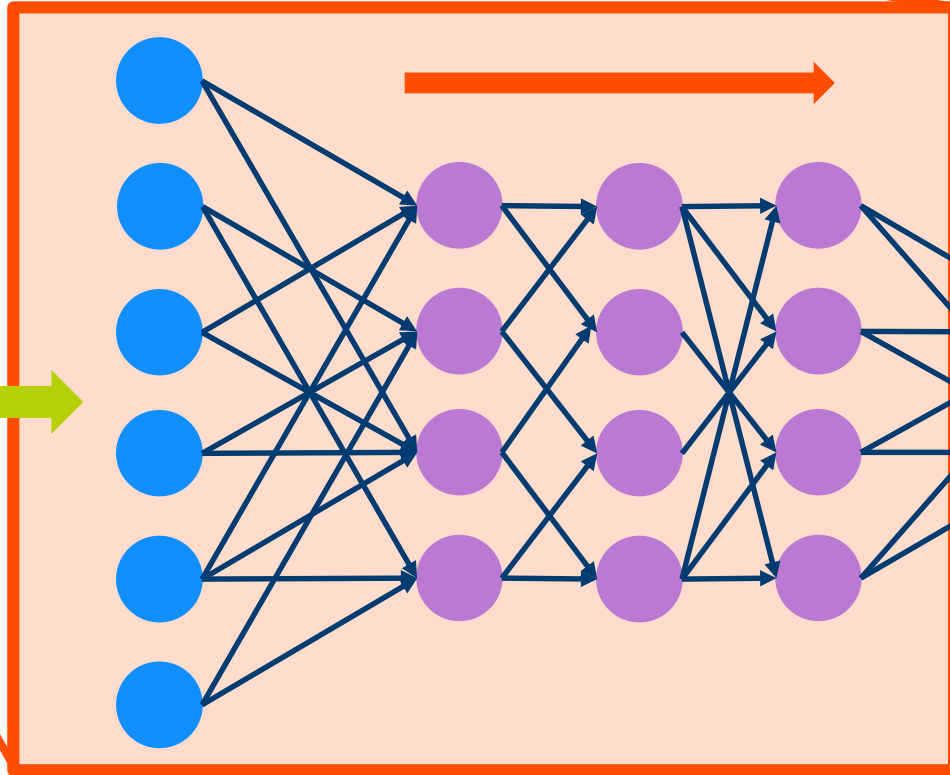
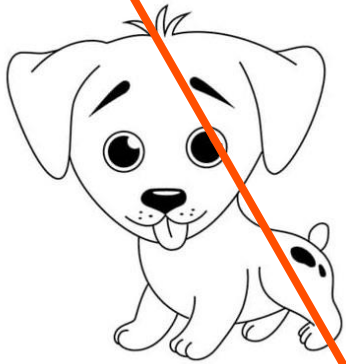
Graph transformation operations



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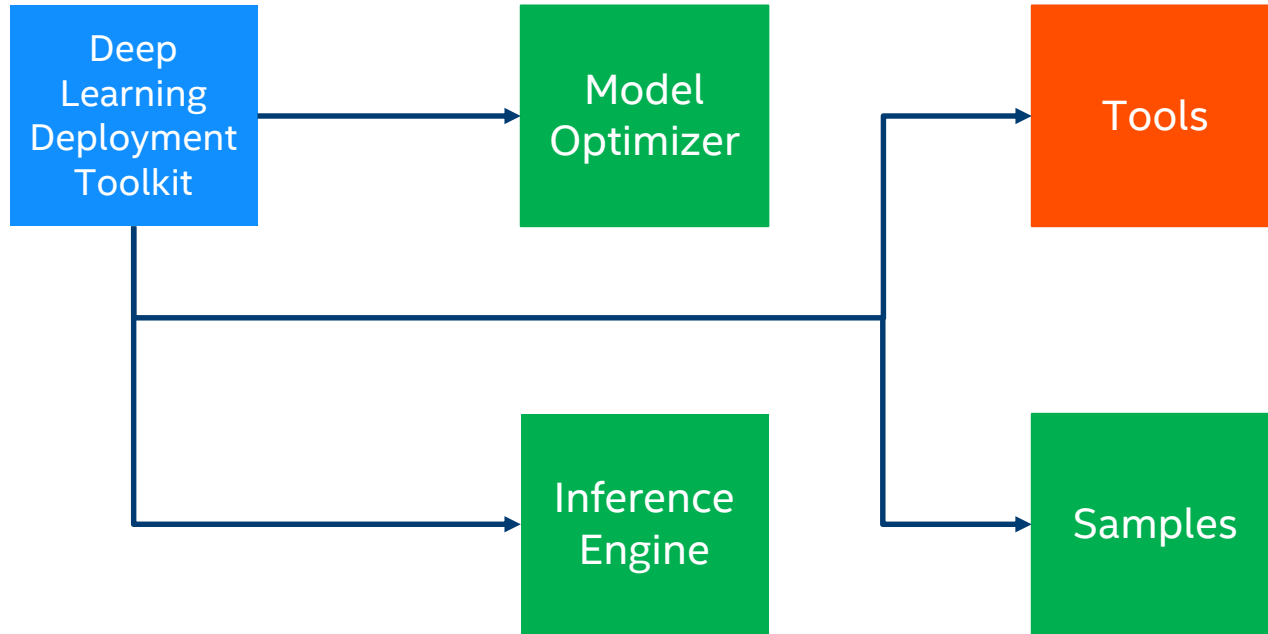
Inference Engine



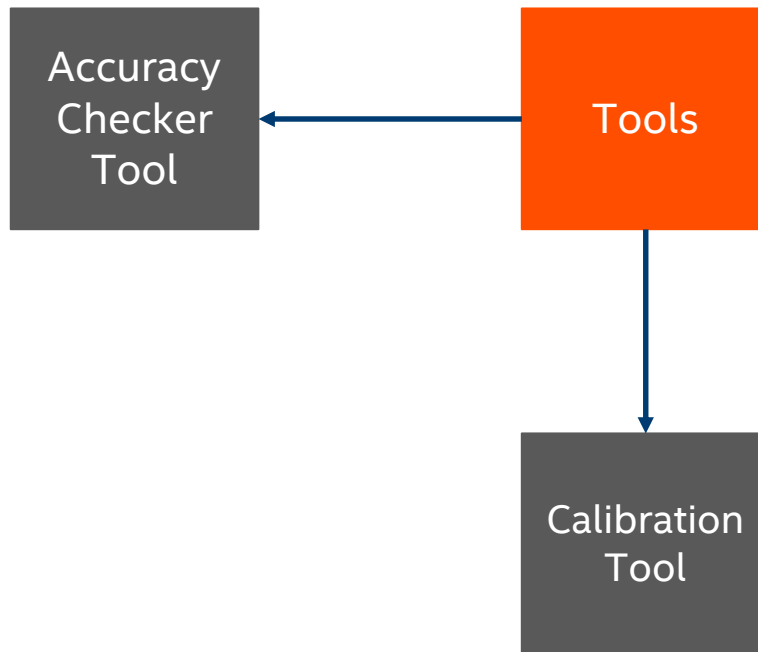
Dog

Cat

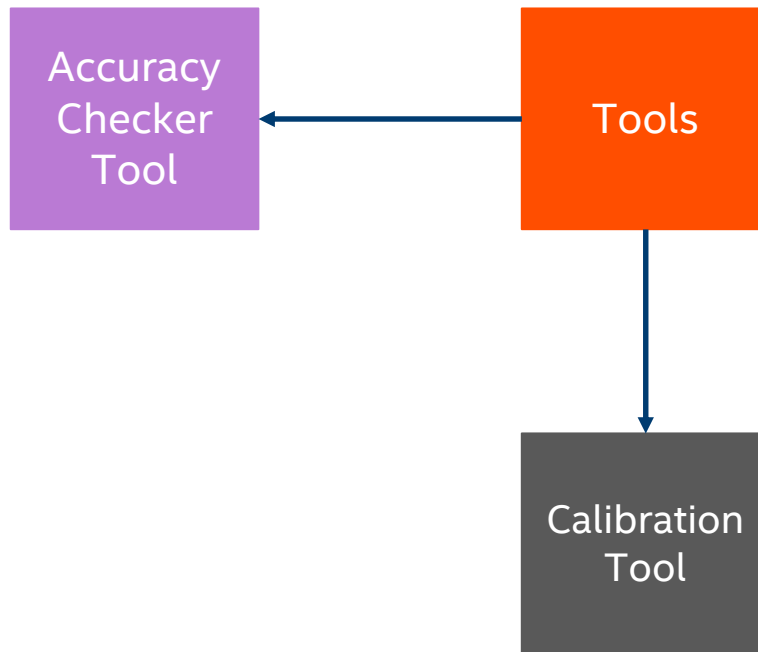
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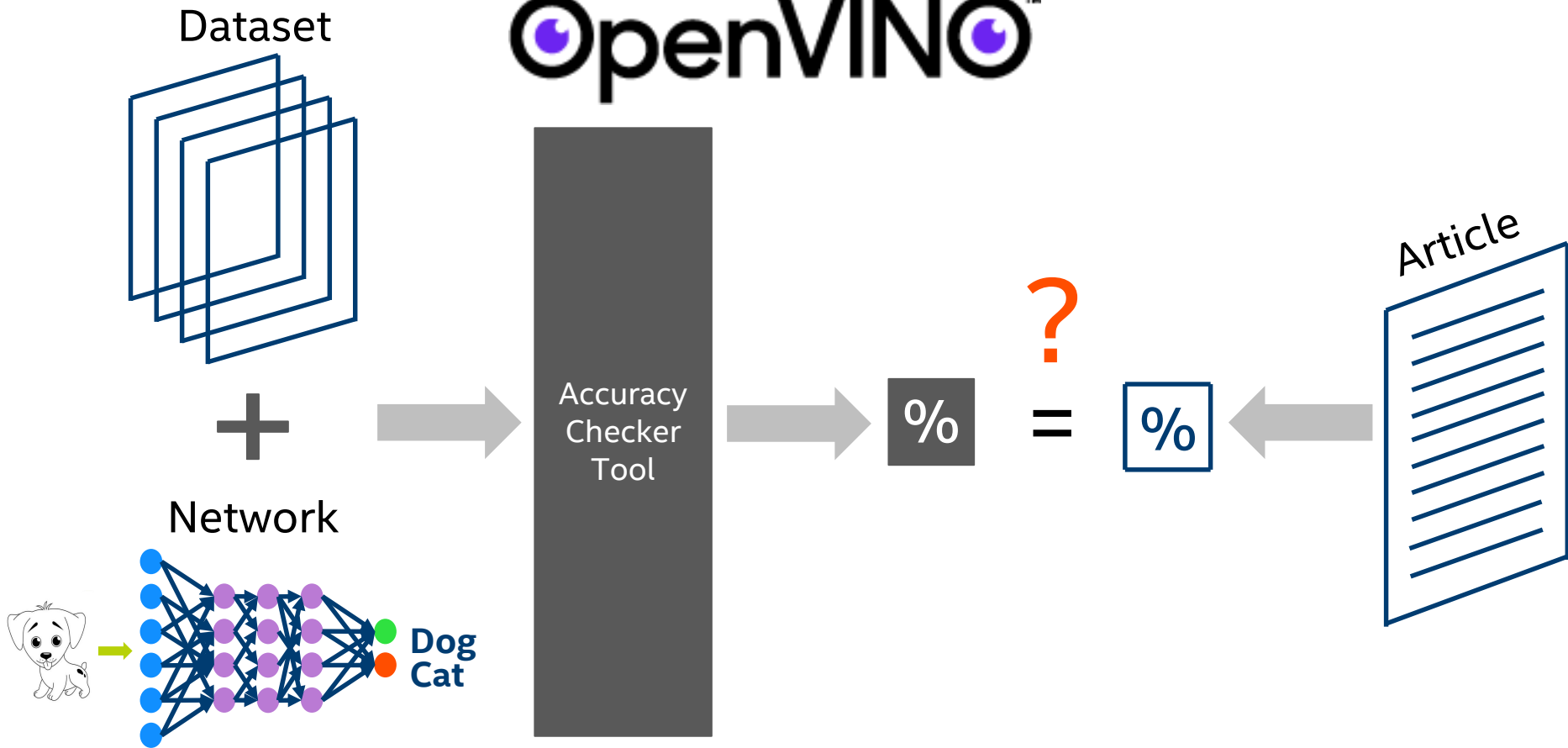
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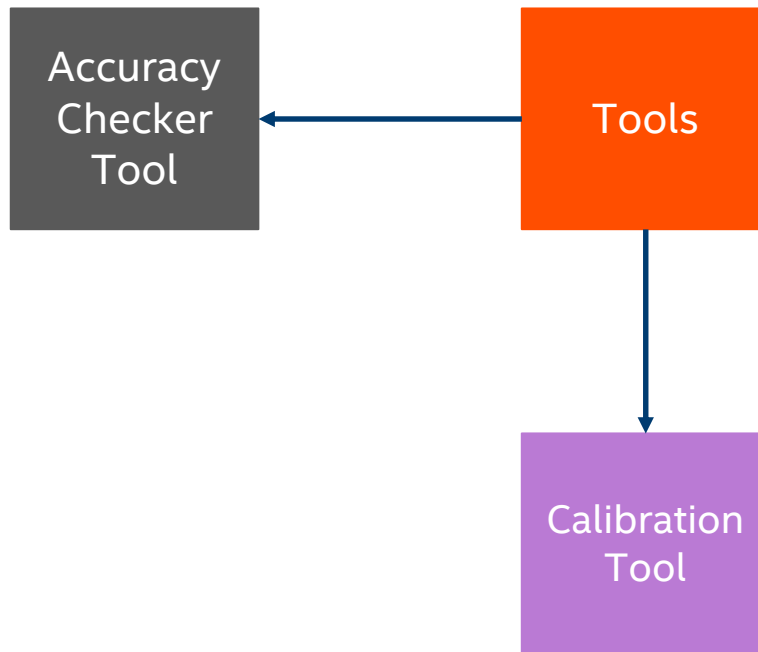
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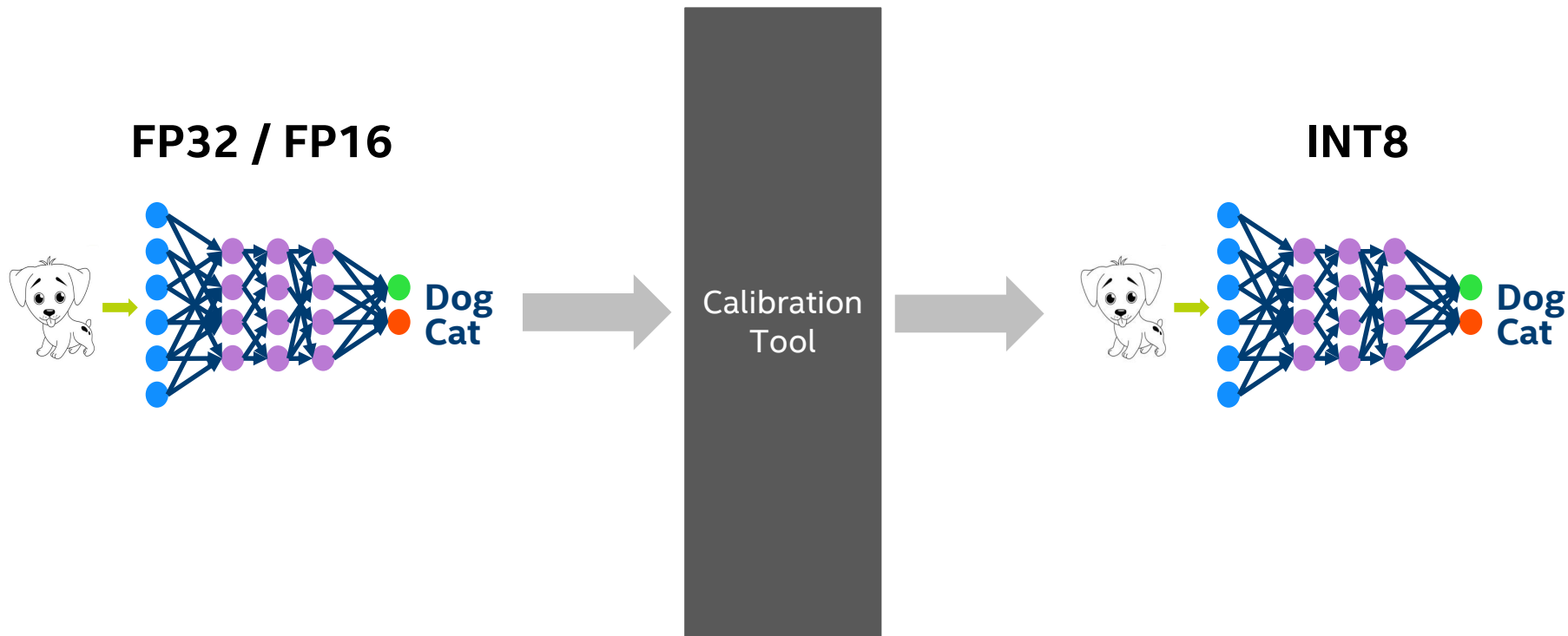
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Calibration
Tool

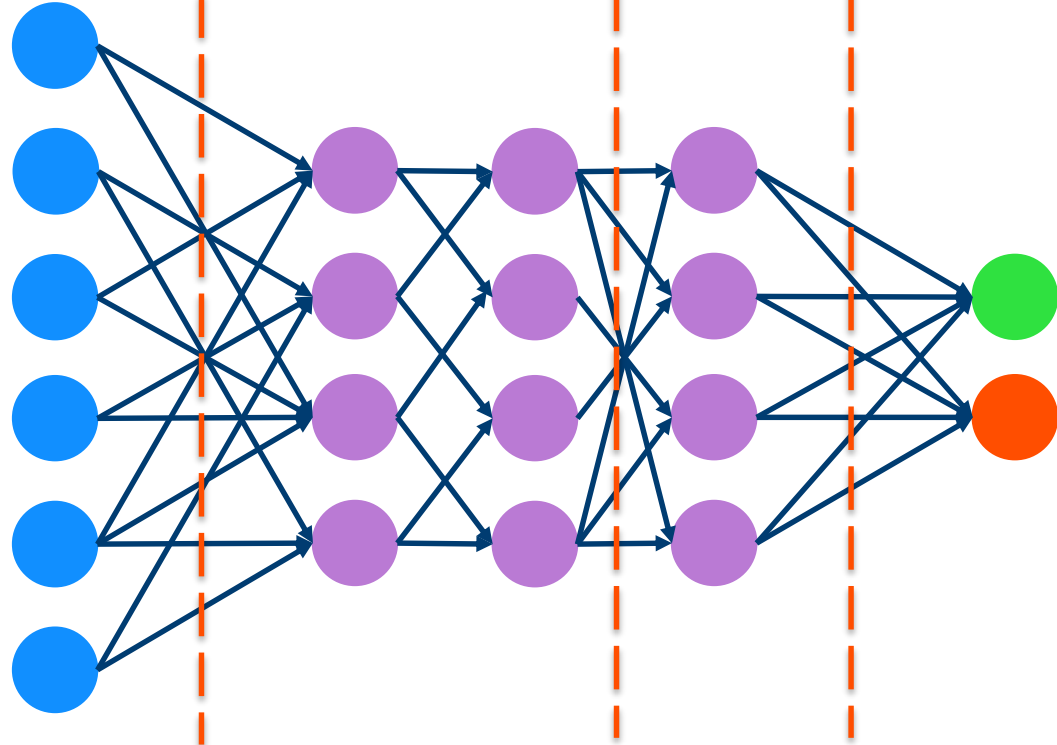


FP32

INT8

FP32

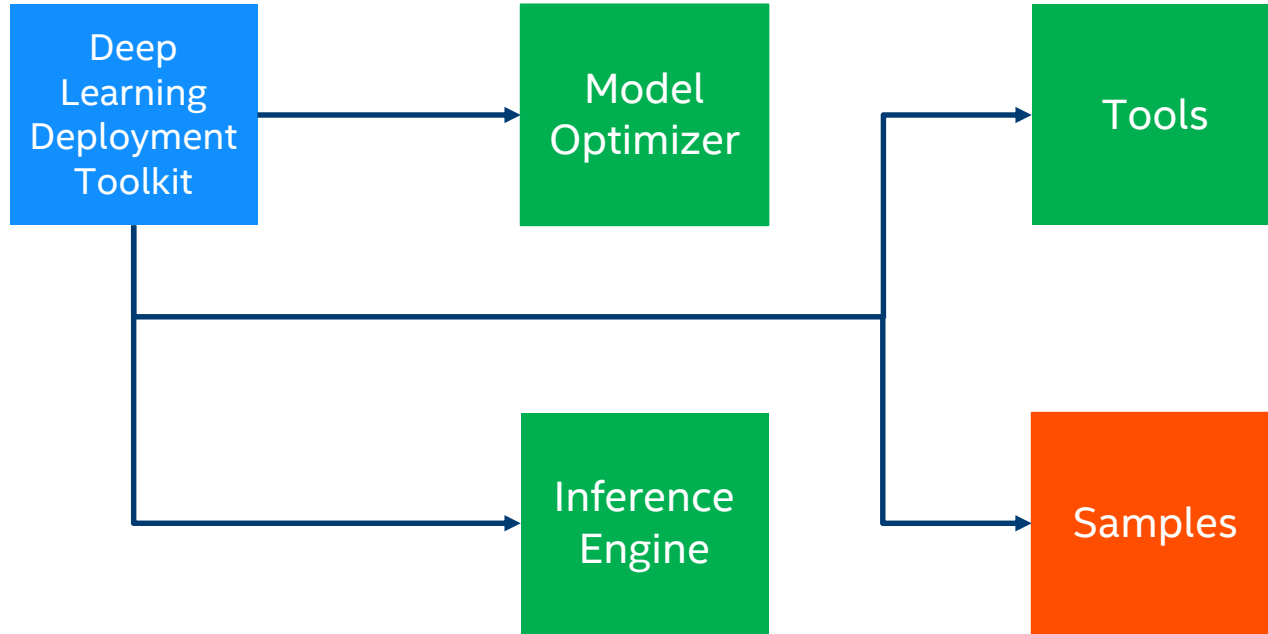
INT8



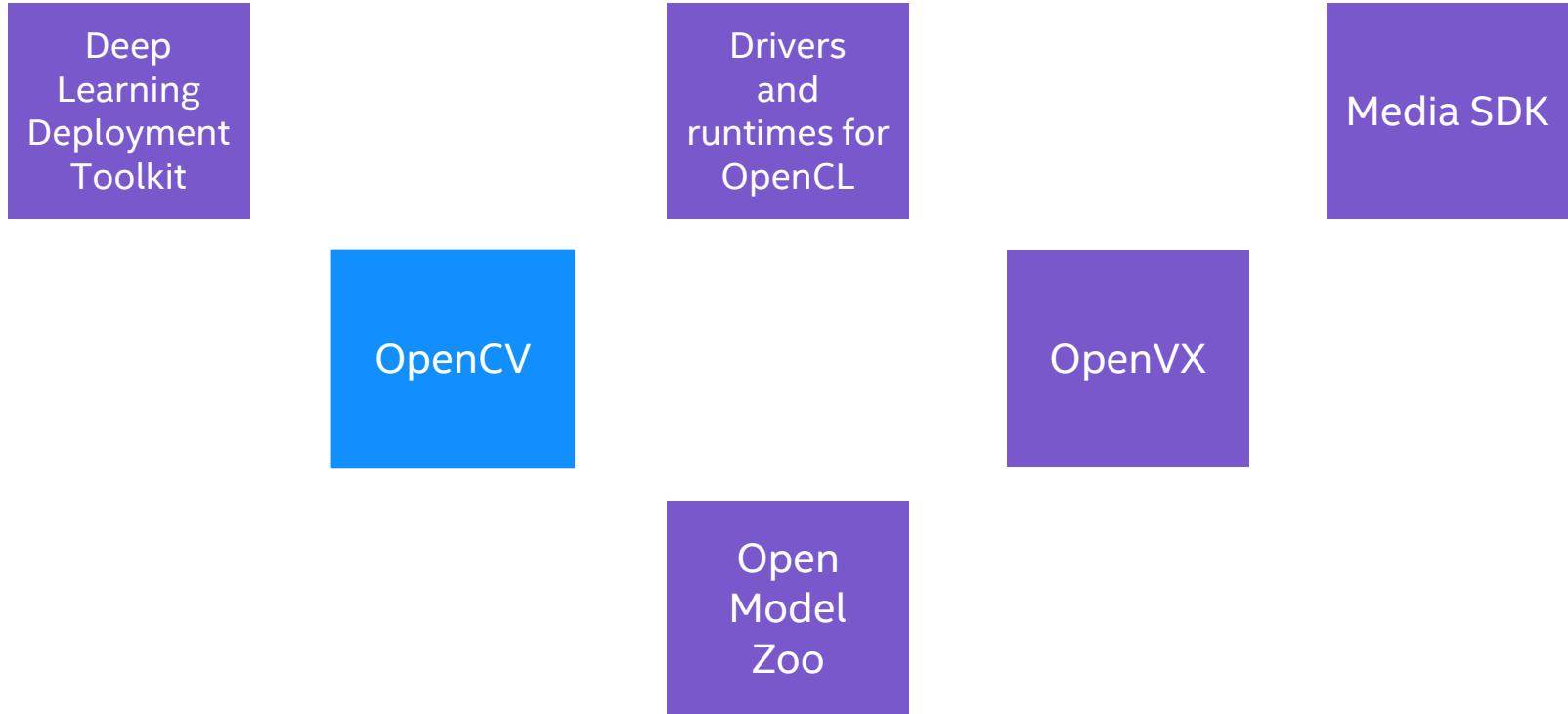
Dog

Cat

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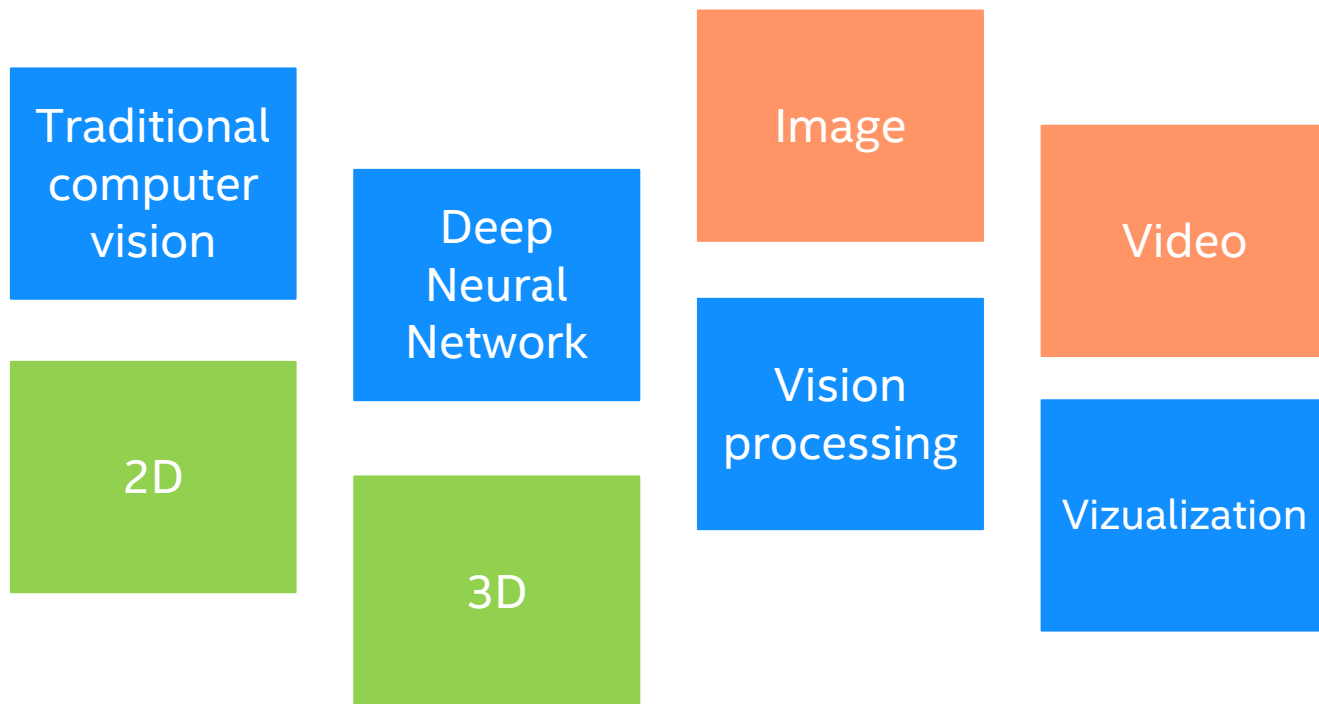


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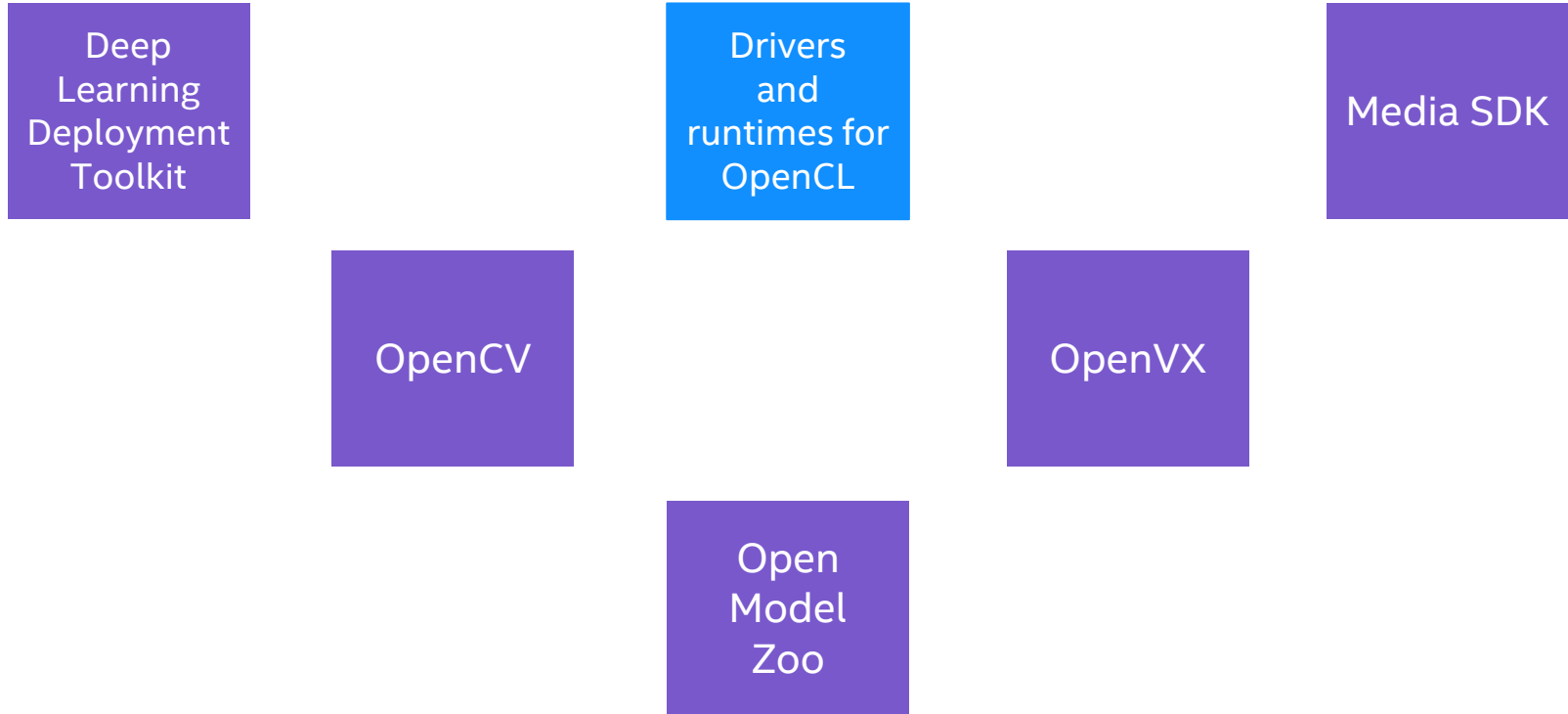




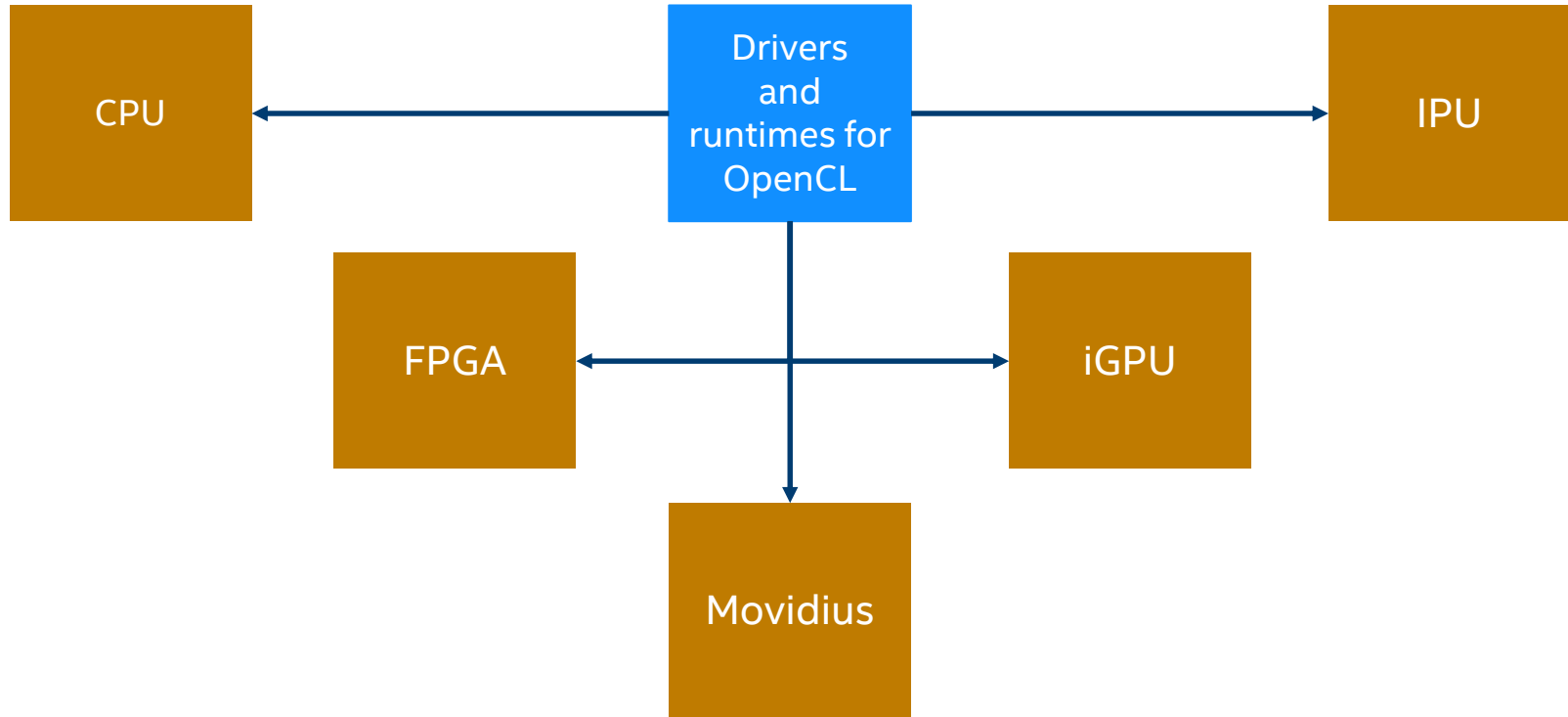
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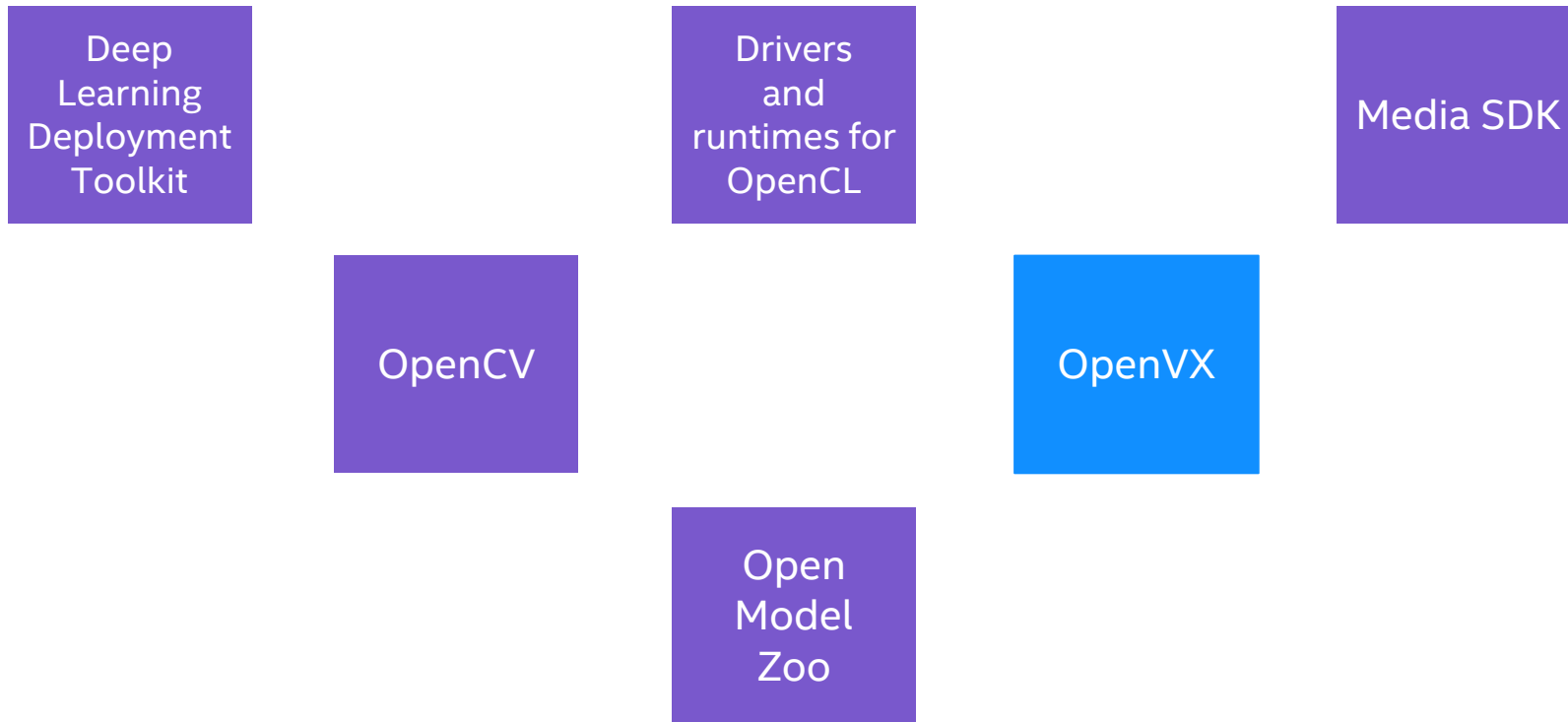
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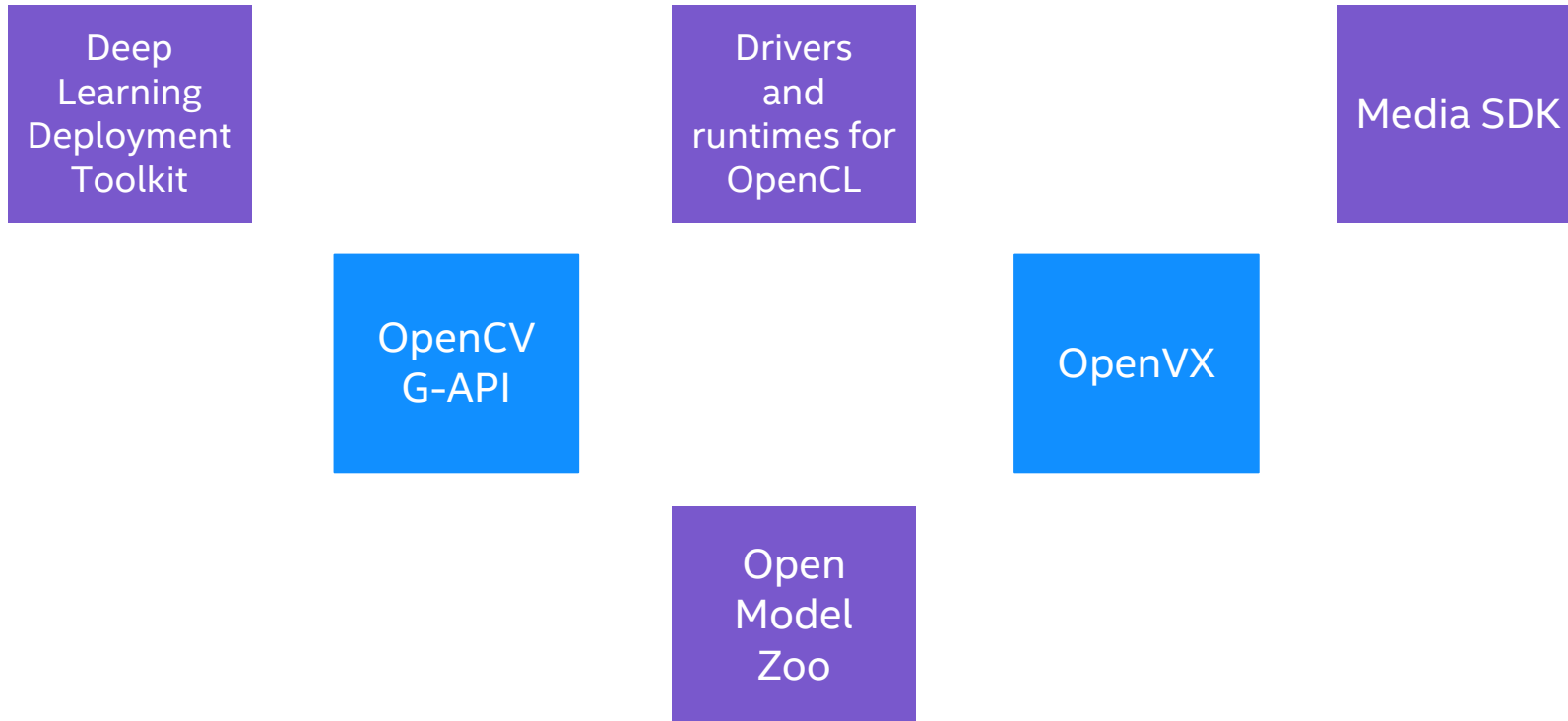
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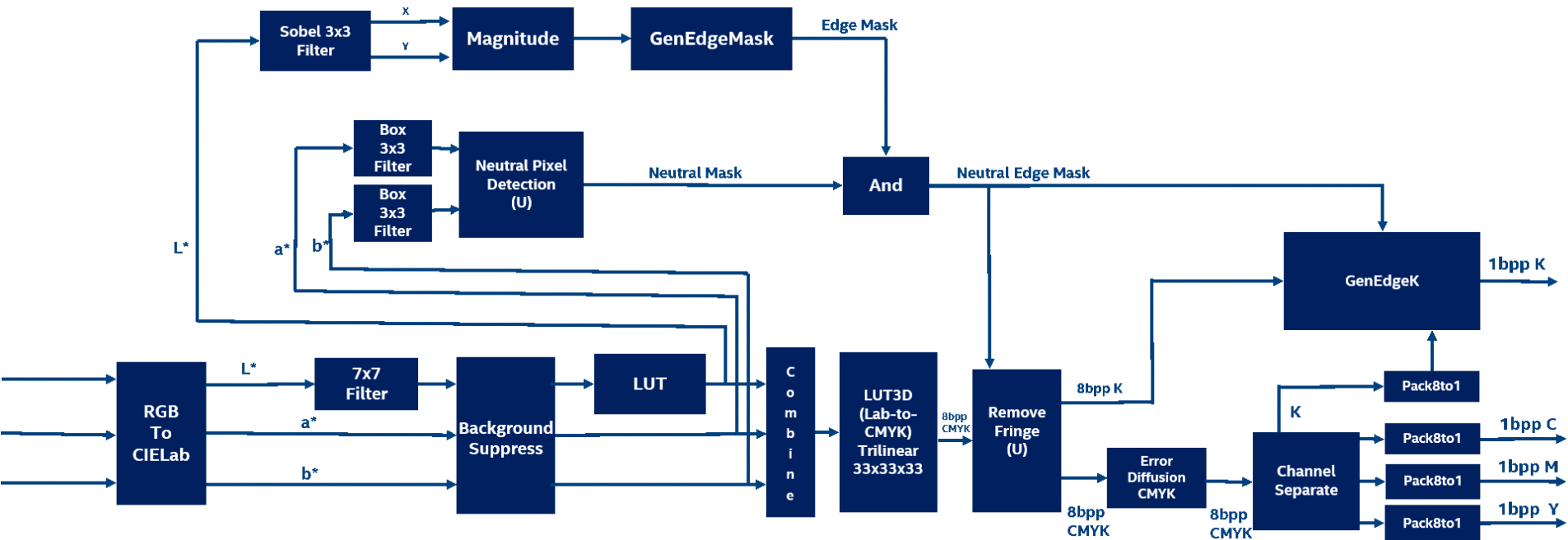


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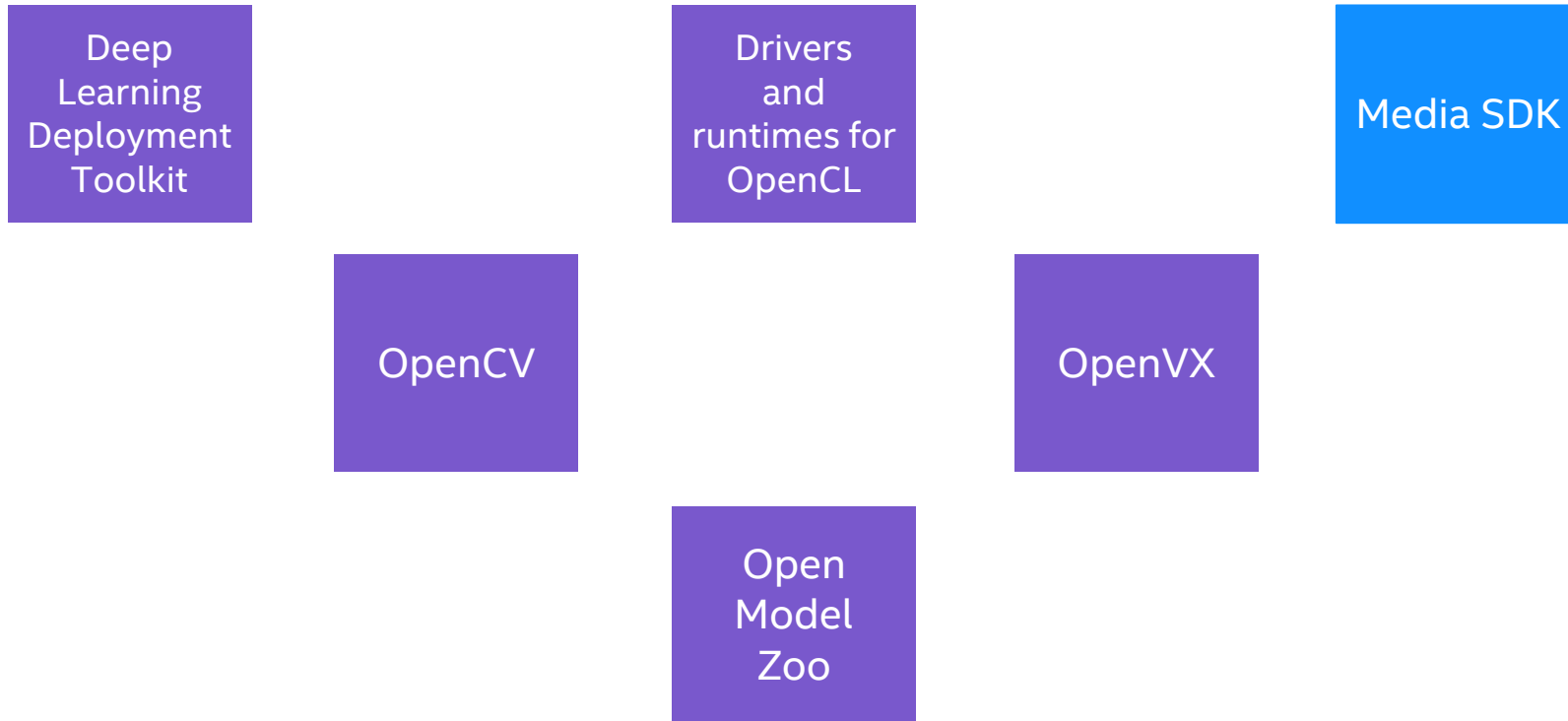


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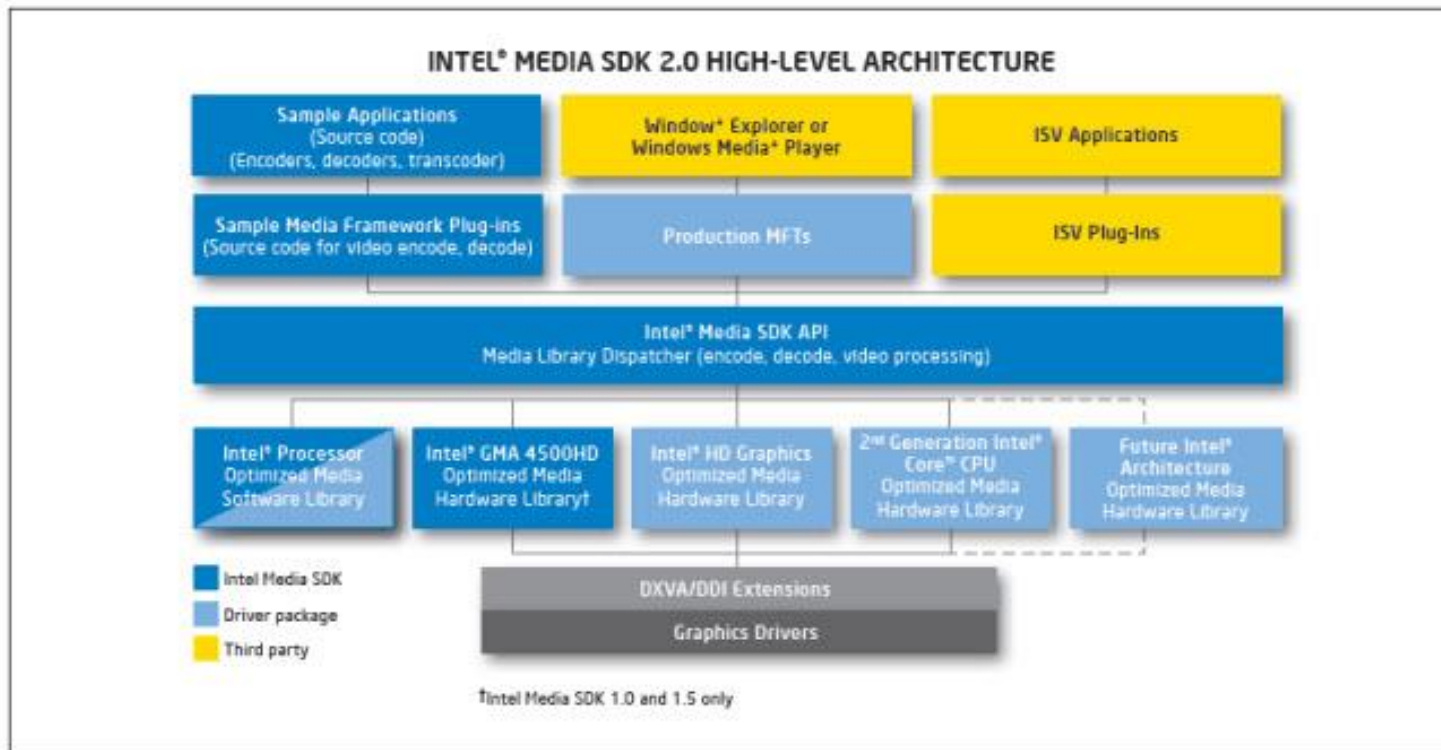
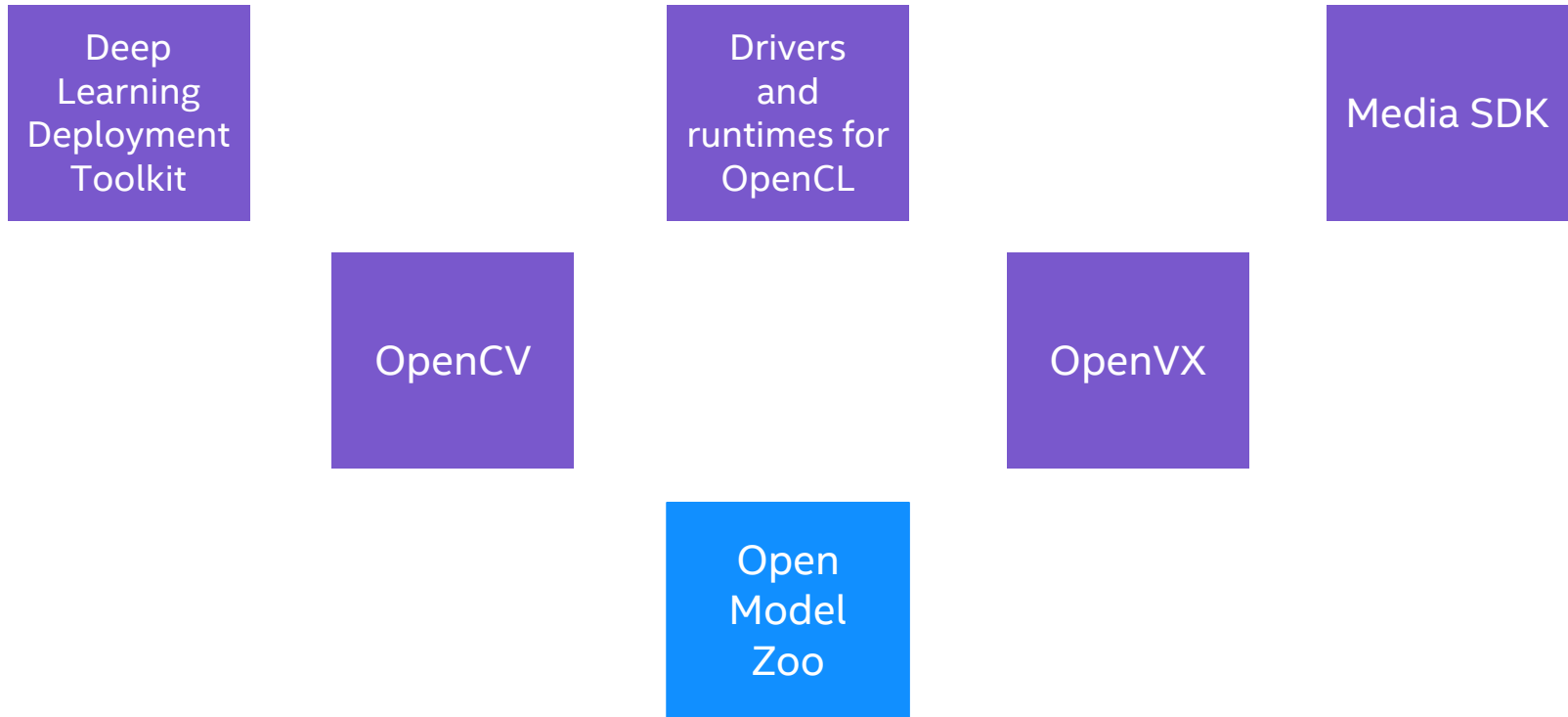


Figure 1. The standardized API insulates developers from the complexities of individual graphics platforms.

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