## Deep Learning Tech Introduction

#### Nesterov Alexander, Obolenskiy Arseniy

ITLab

November 15, 2024

### Contents

### Deep neural network

- 2 What we can to do with DNN?
- 3 First network

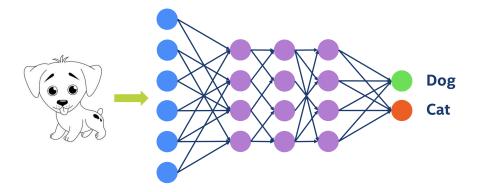
#### 4 Frameworks

- 5 OpenVINO Small IR
- 6 OpenVINO Netron

ITLab

#### 7 What next?

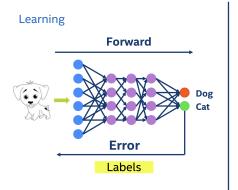
### Deep neural network



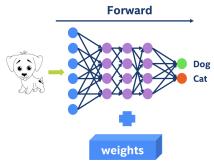
크

< ≣ ▶

ITLab

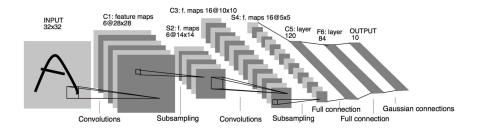


#### Inference



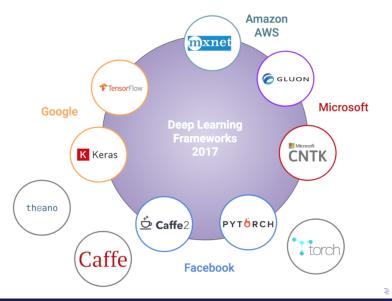
크

→

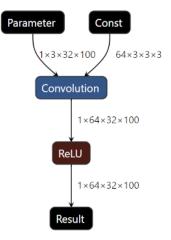


Source: Revisiting the LeNet-5 architecture, from "Gradient-Based Learning Applied to Document Recognition" by Yann LeCun et al., Proc. of the IEEE, 1998.

(I) < (I)



## **OpenVINO - Small IR**



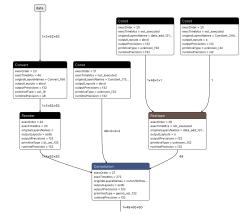
Source: docs.openvino.ai

ITLab

イロト イヨト イヨト イヨト

2

# OpenVINO - Netron



Source: netron.app

ITLab

イロト イポト イヨト イヨト 二日

- Arm Compute Library (ACL) what is it?
- Layers representation in ACL
- First Examples