

Deep networks: TensorFlow



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What is TensorFlow?

- Open source software library by Google
- Originally created for task with heavy numerical computations
- Main application: Machine Learning & Deep Neural Networks
- C/C++ backend
- Based on data flow graphs



Why TensorFlow?

- Large Community
- Python and C++ API
- Responsive Construct
- Open Source
- Faster compile times
- Supports CPUs, GPUs and distributed processing
- Layered Components

● tensorflow
Wyszukiwane hasło

● theano
Wyszukiwane hasło

● Keras
Wyszukiwane hasło

+ Dodaj porównanie

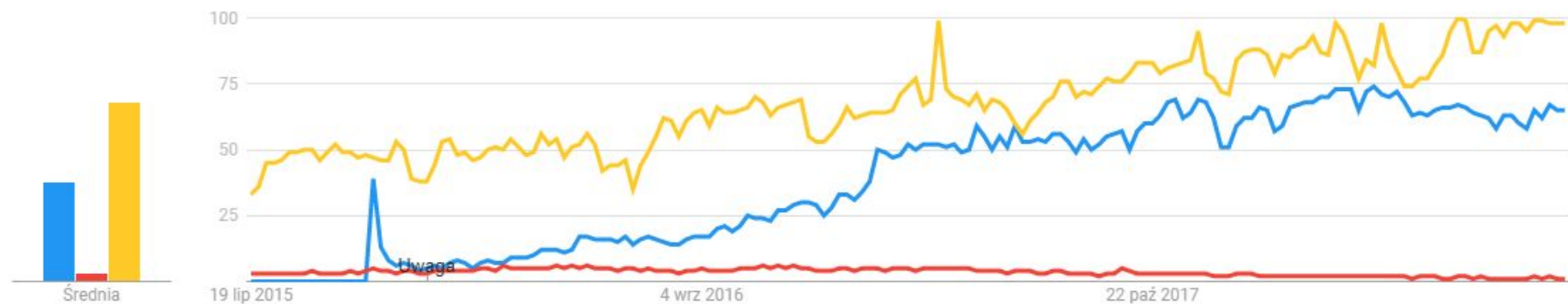
Cały świat ▼

Od 15.07.2015 do 14.11.2018 ▼

Wszystko ▼

Wyszukiwarka Google ▼

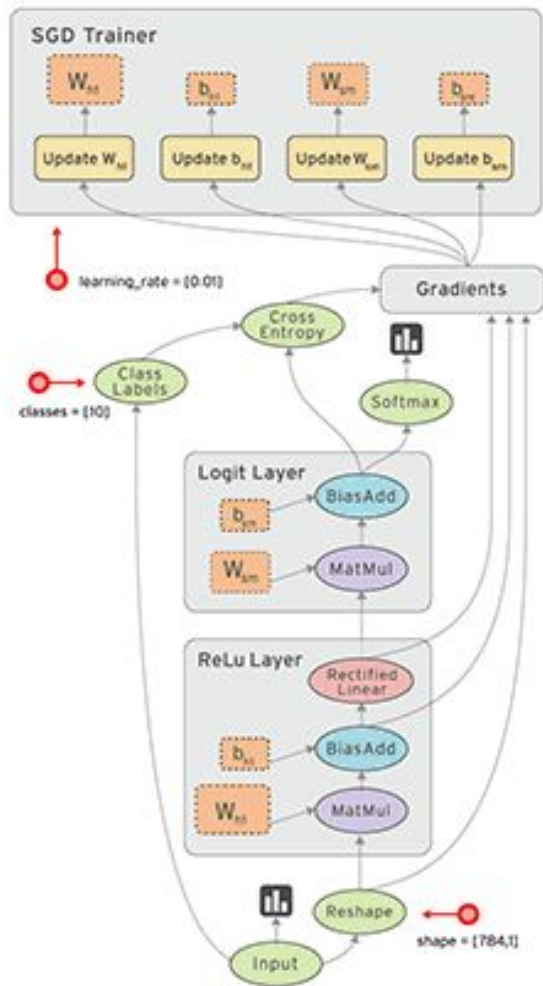
Zainteresowanie w ujęciu czasowym ?



What is data flow graph?

We create a graph with these computation units:

- Nodes = mathematical operations
- Edges = Tensors
(Multi-Dimensional Arrays)

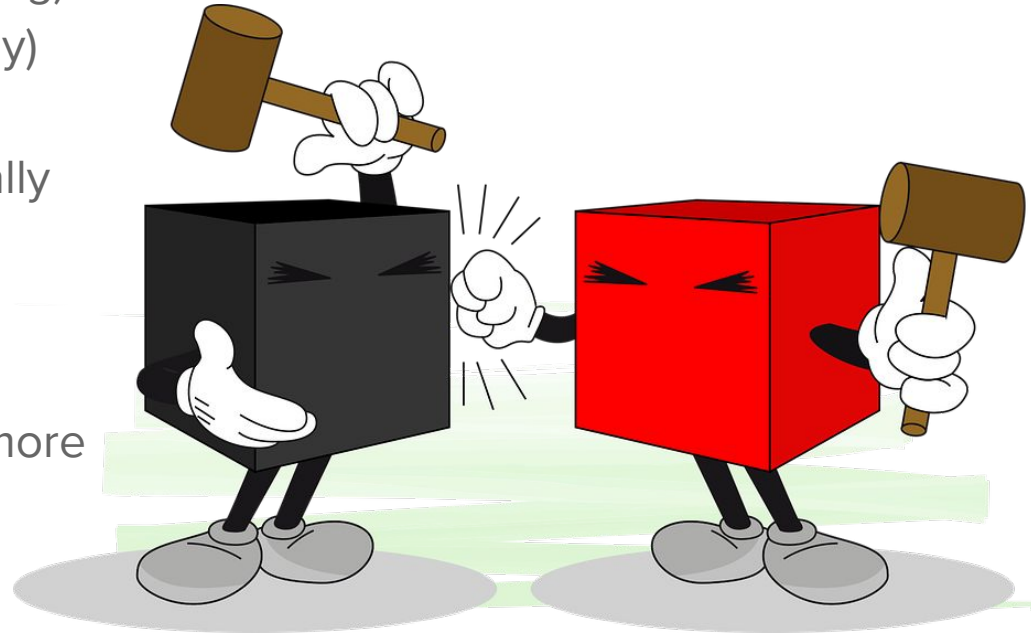


Deep learning

- subcategory of machine learning
- creates neural networks
- helped to achieve progress in a wide variety of areas such as object recognition, machine translation, speech recognition

Deep learning vs machine learning

- without supervision (deep learning)
- faster and more accurate (usually) (deep learning)
- errors must be corrected manually (machine learning)
- using neural networks (deep learning)
- deep learning's models needs more data



Who uses TensorFlow?

Google




Dropbox


UBER


airbnb

ebay[™]

Demo



Other tools

- TensorFlow Debugger
- TensorBoard
- TensorFlow.js



Thank you for your attention!

