Overview of Deep Learning Frameworks

What we have covered till now?

- Introduction to Neural Networks

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Neural Network Recap

W^T

.3	.6	.8	1
.8	.3	1	1
.8	.8	1	.2
.7	.1	.6	.7
.2	.2	.7	1

5 X 4

✖

X

1	1	0	0	1	1
3	58	8	70	14	10
0	1	0	0	0	0
0	1	0	1	0	0

4 X 6

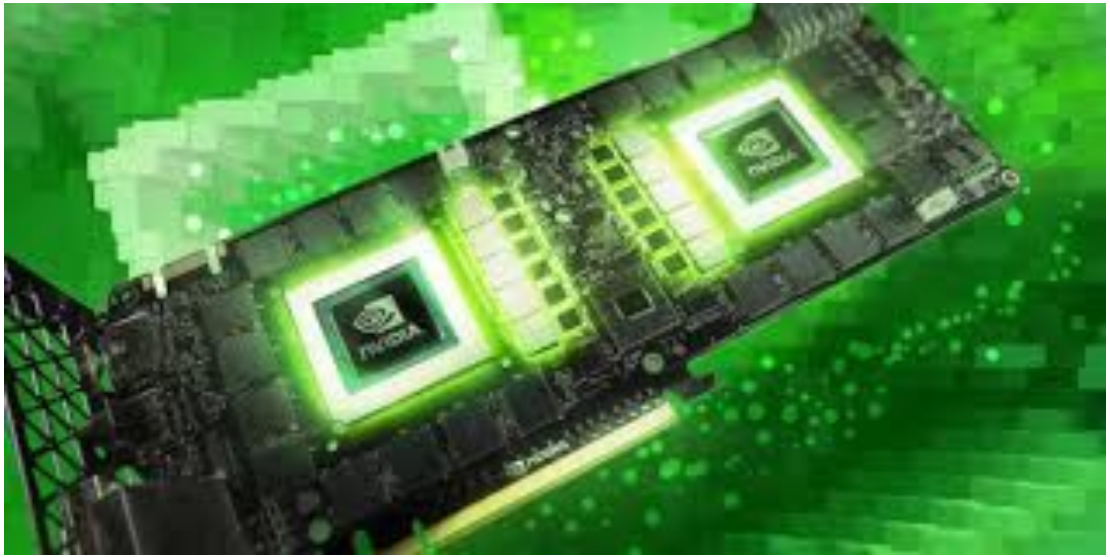
=

$Y = W^T X$

2.1	36.9	4.8	43	8.7	6.3
1.7	20.2	2.4	22	5	3.8
3.2	48.4	6.4	56.2	12	8.8
1.0	7.8	0.8	7.7	2.1	1.7
0.8	13.5	1.6	15	3	2.2

5 X 6

GPU



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2. Clear and concise way for defining models using a collection of pre-built and optimized components

Advantages of Deep Learning Framework

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2. Reduces code complexity

PyTorch

1. Developed by: Facebook's AI research group
2. Written in C and Python
3. More popular amongst researchers

TensorFlow

1. Developed by: Google Brain team
2. Tensorboard for effective data visualization
3. Written in C++ and Python
4. Need more programming experience
5. Larger community base

Keras

1. High level library and hence enables fast experimentation
2. Uses TensorFlow at backend
3. Focus more on doing rather than “implementation details”
4. Easiest framework to start your deep learning journey

Thank You