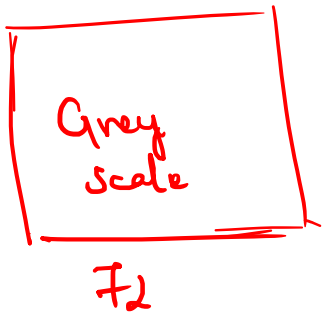
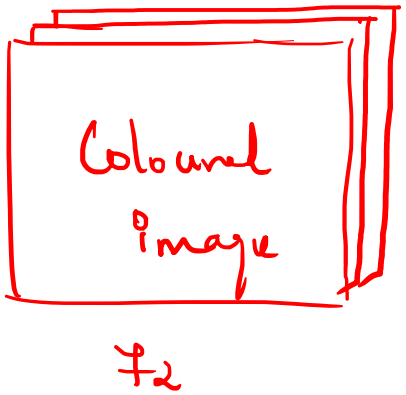


$\Rightarrow (72 \times 72) \Rightarrow$ 5184 input neurons.



$\Rightarrow (72 \times 72 \times 3) \Rightarrow$ 15,552 input neurons.

since the number of input neurons is too high, using ANN on image data is computationally expensive & not feasible

⇒ Tensorflow & keras — open source

⇒ Tensorflow has complex architecure, keras is a high-level neural network library that runs on top of tensorflow.

⇒ keras — user friendly.

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keras — small dataset | python

Tensorflow — large dataset, high performance | CUDA, C++, python

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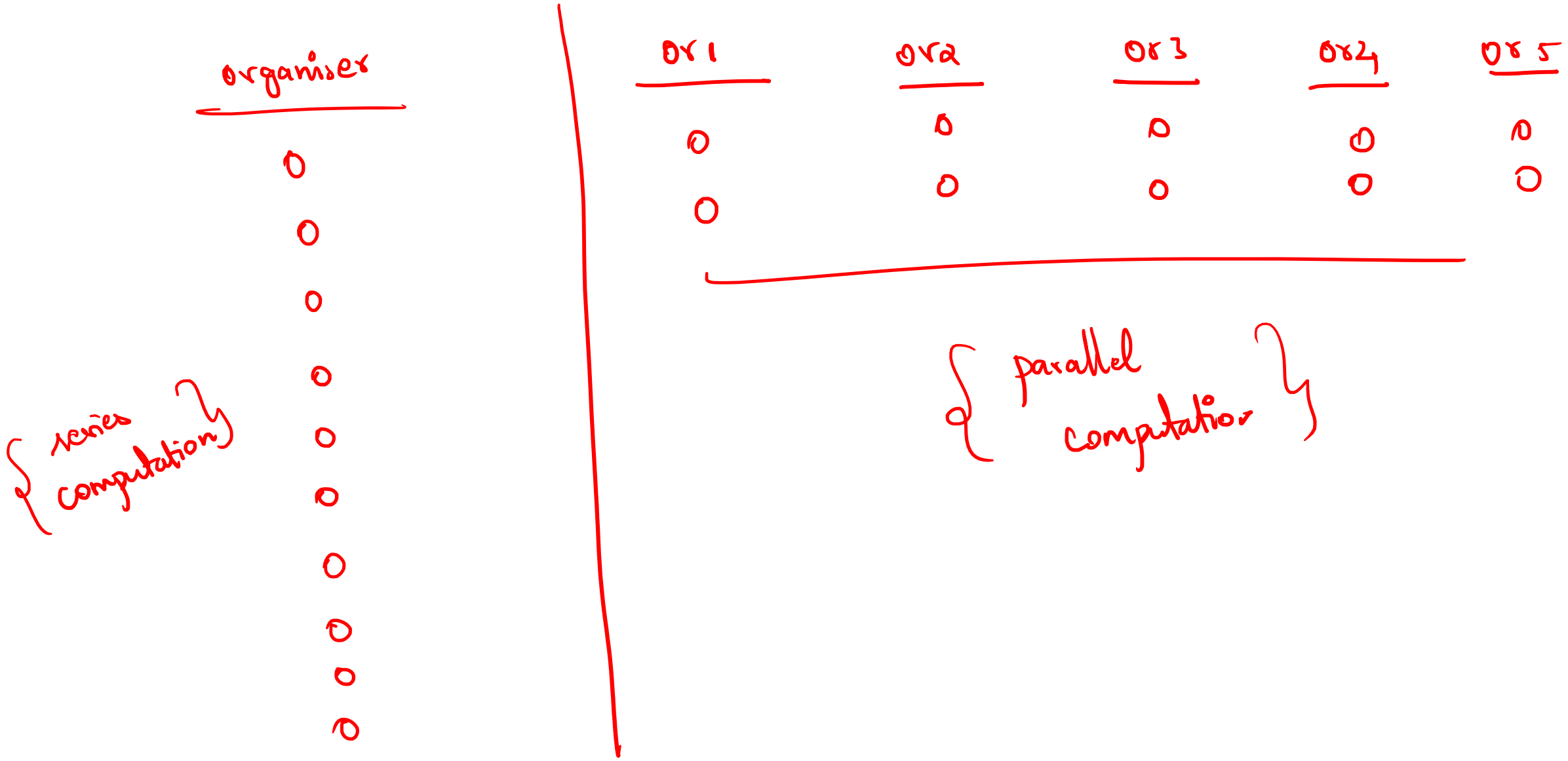
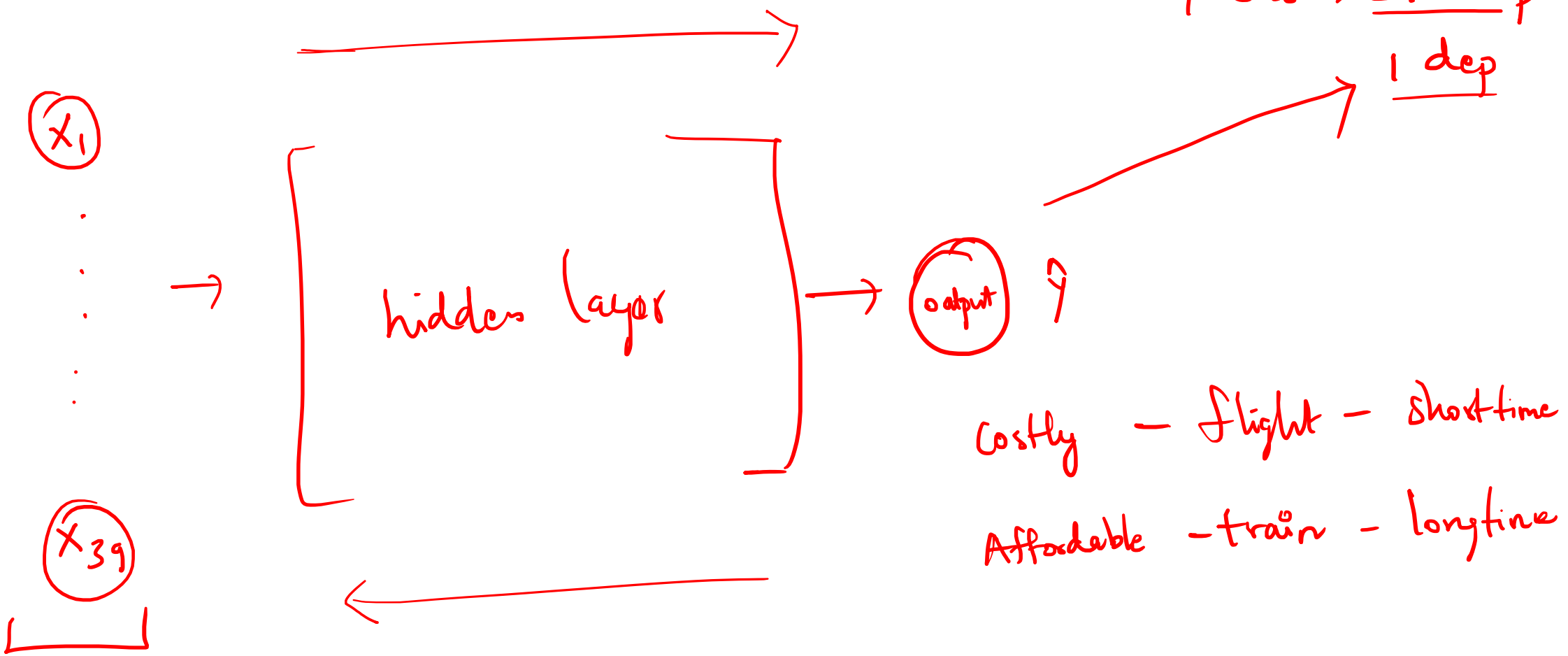
computation: (hardware)

CPU, GPU, TPU


organiser
serial computation
or1
or2
or3
or4
or5
parallel computation


40 cols → 39 indep
1 dep
x_1
x_{39}
hidden layer
output
y
Costly – flight – shorttime
Affordable – train – longtime

2016 - 2018 ← 2019 - June

2020 - March

Deeplearning (Neural Network) ⇒ framework + {Neural architecture}

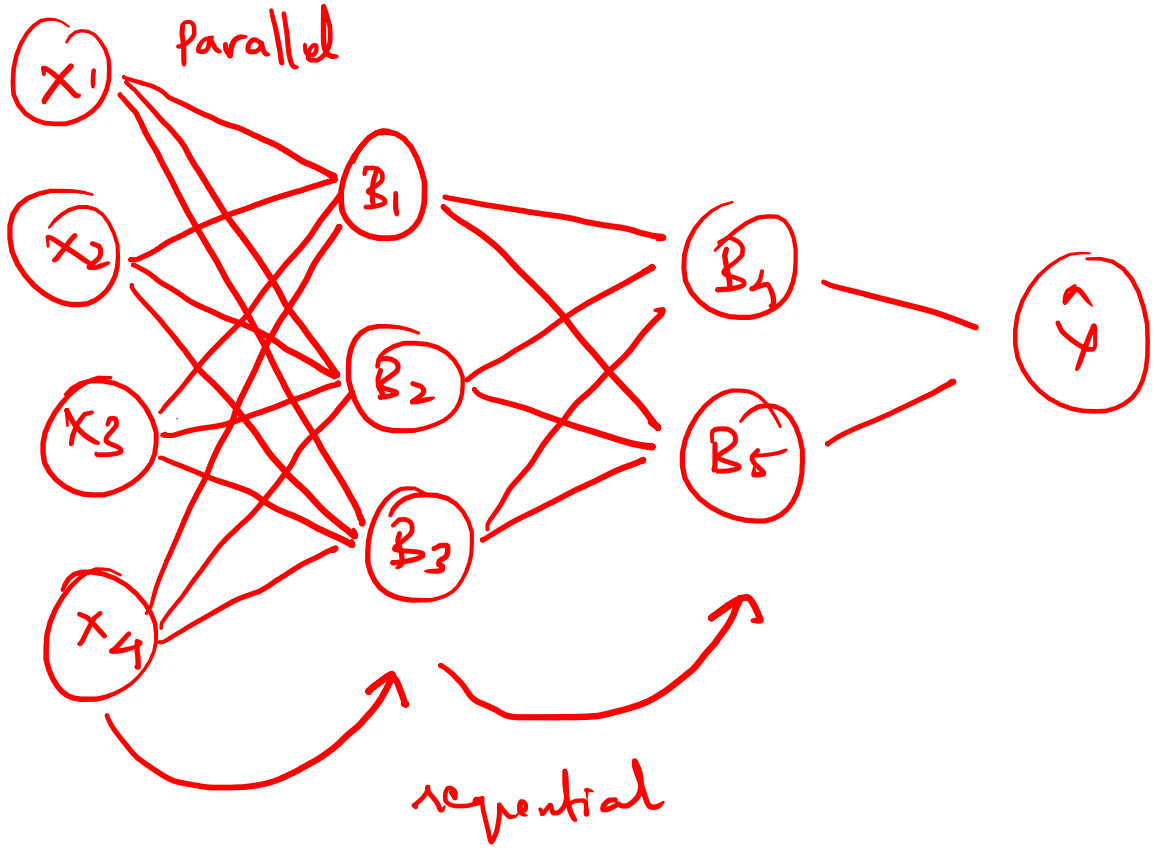
1000 records ⇒ ML (700 train + 300 test) (new data)

⇓

DL (1000 prediction) new

Neural Network is a sequential model

processing in NN will happen in paralled



Homework:

⇒ Adam, SGD, Gradient descent

⇒ Sparse metric, binary class

⇒ mean_square_absolute