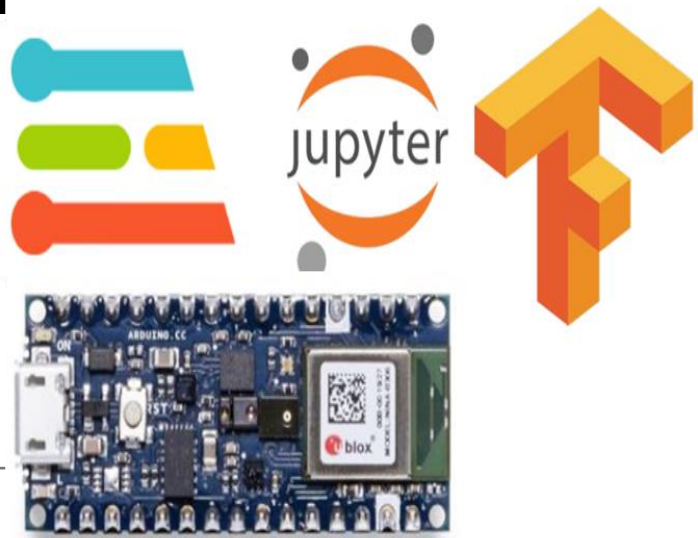
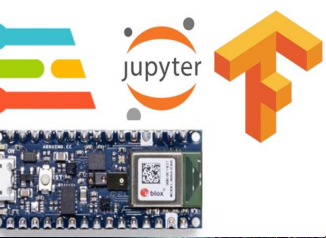
Advanced Microprocessors

FIRST NEURAL NETWORK

Dennis A. N. Gookyi





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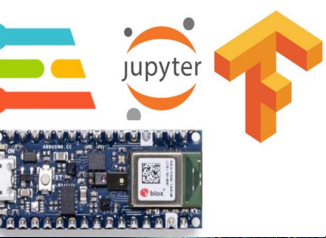

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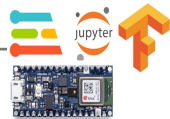
X ➡ -1, 0, 1, 2, 3, 4

Y ➡ -3, -1, 1, 3, 5, 7



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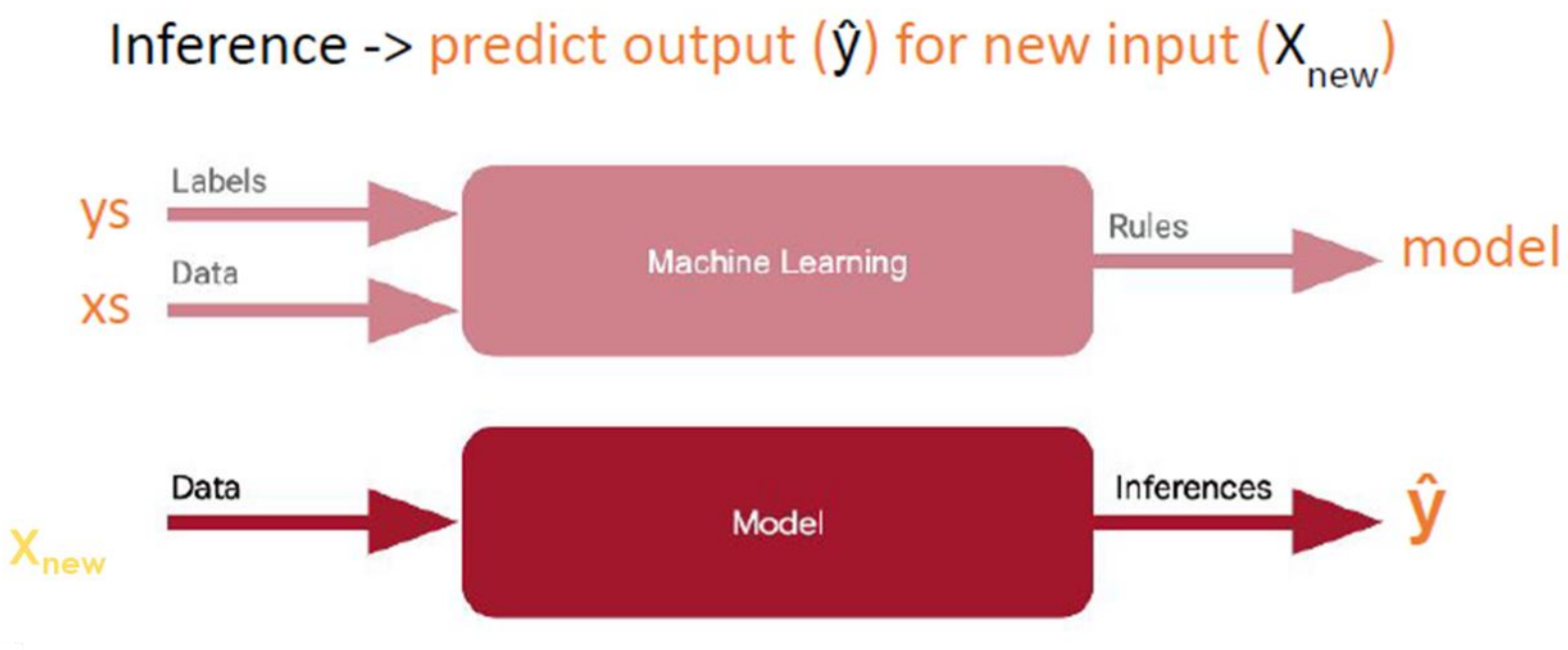

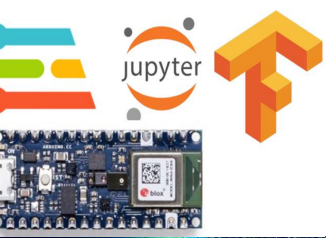

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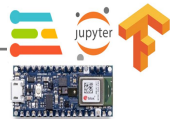
model = keras.Sequential([keras.layers.Dense(units=1, input_shape=[1])])
model.compile(optimizer='sgd', loss='mean_squared_error')


xs = np.array([-1.0, 0.0, 1.0, 2.0, 3.0, 4.0], dtype=float)
ys = np.array([-3.0, -1.0, 1.0, 3.0, 5.0, 7.0], dtype=float)


model.fit(xs, ys, epochs=500)


print(model.predict([10.0]))
```

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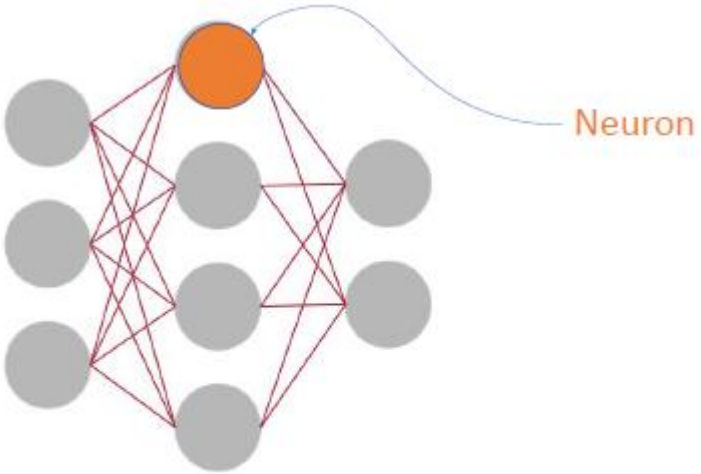

Dense Neural Network (DNN)

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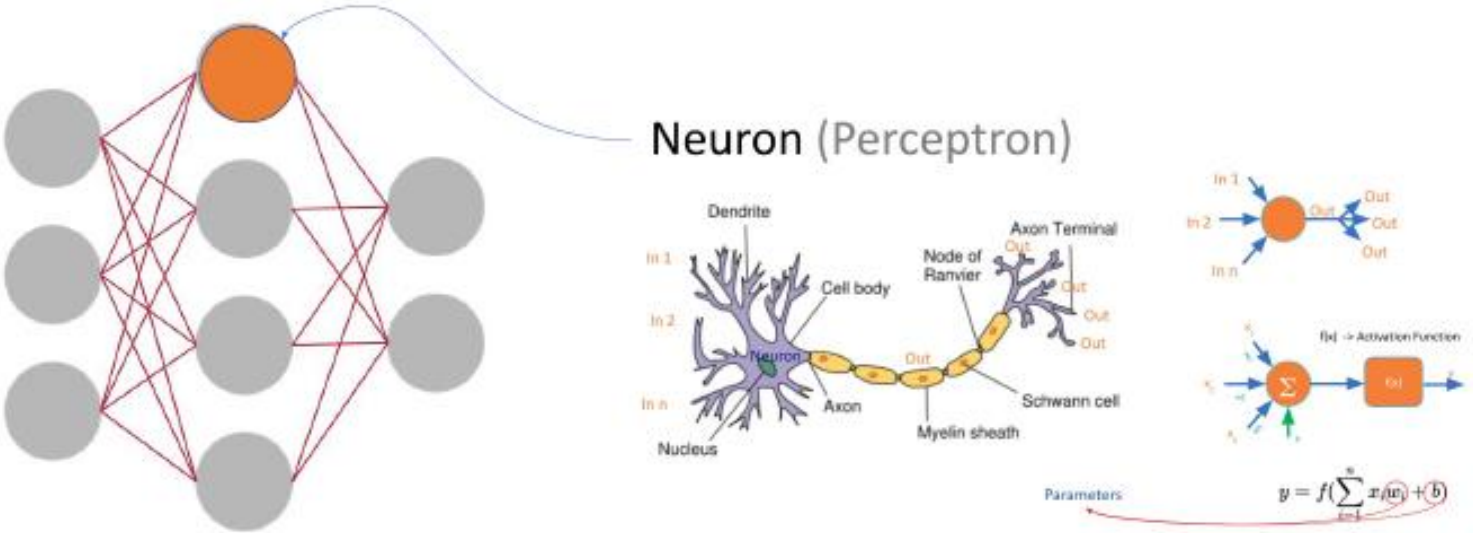

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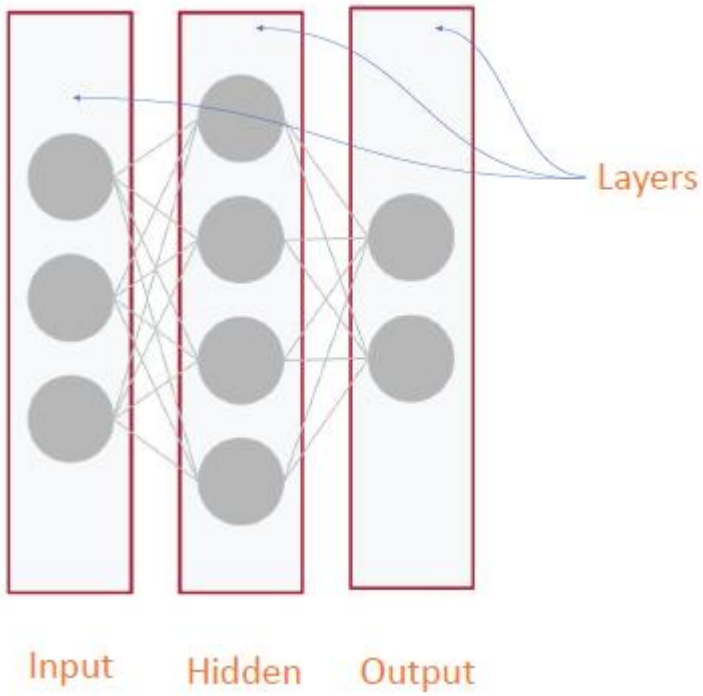

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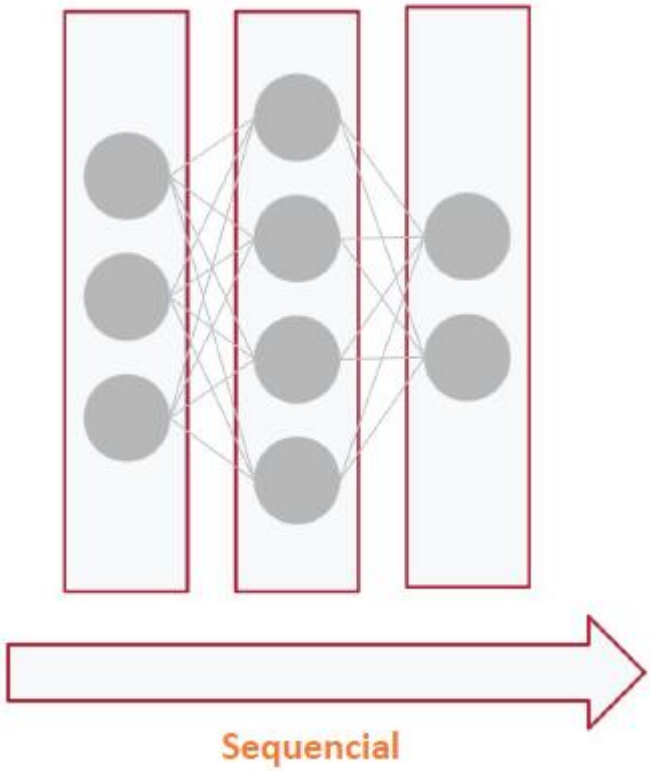

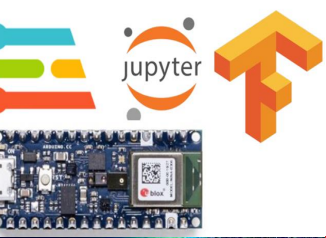

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model.fit(xs, ys, epochs=500)


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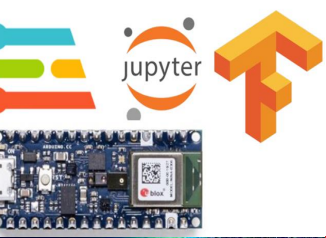

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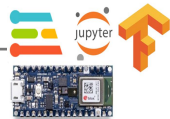
1 Layer



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1 Neuron

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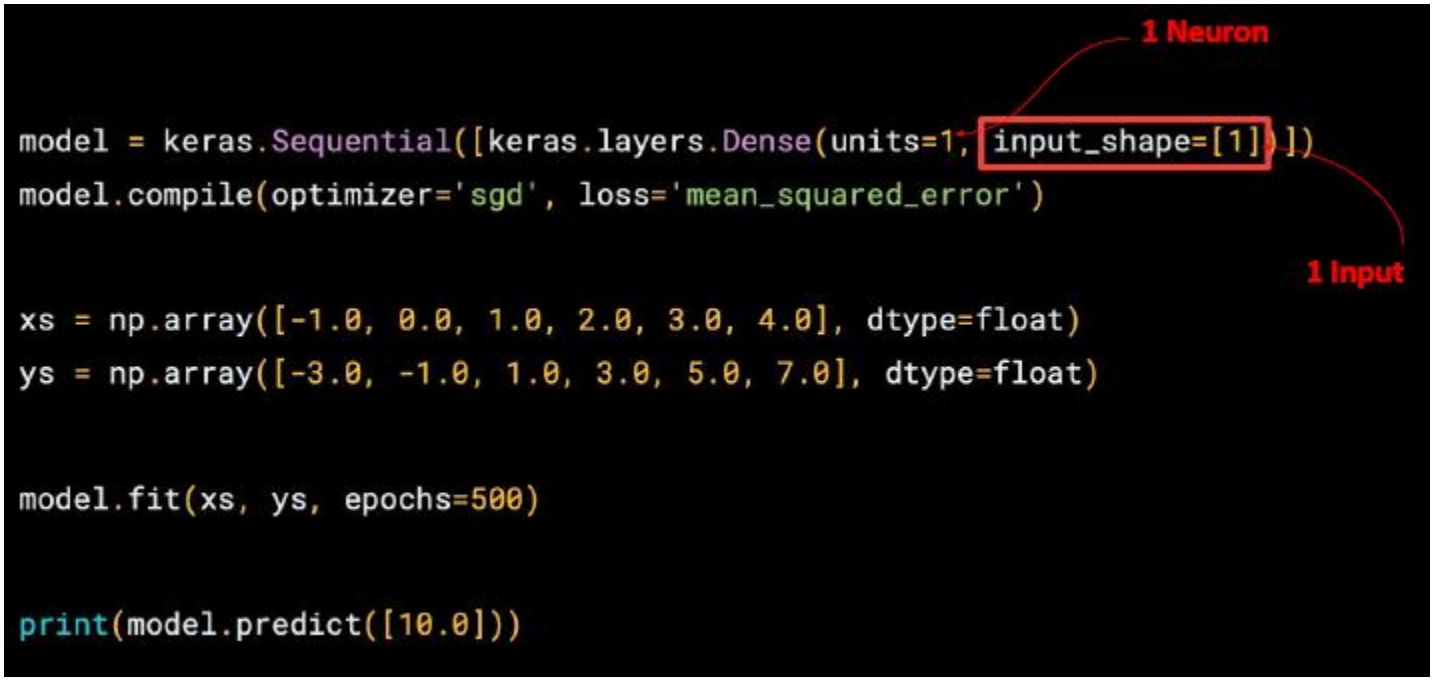

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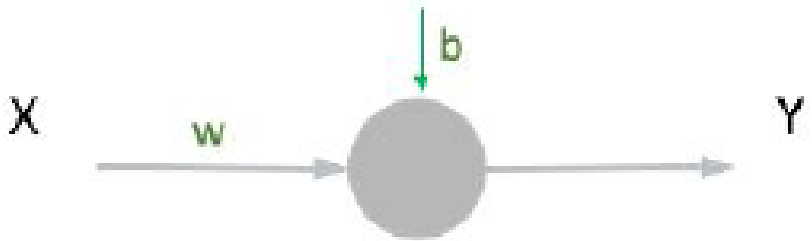

units=1, Input_shape=[1]

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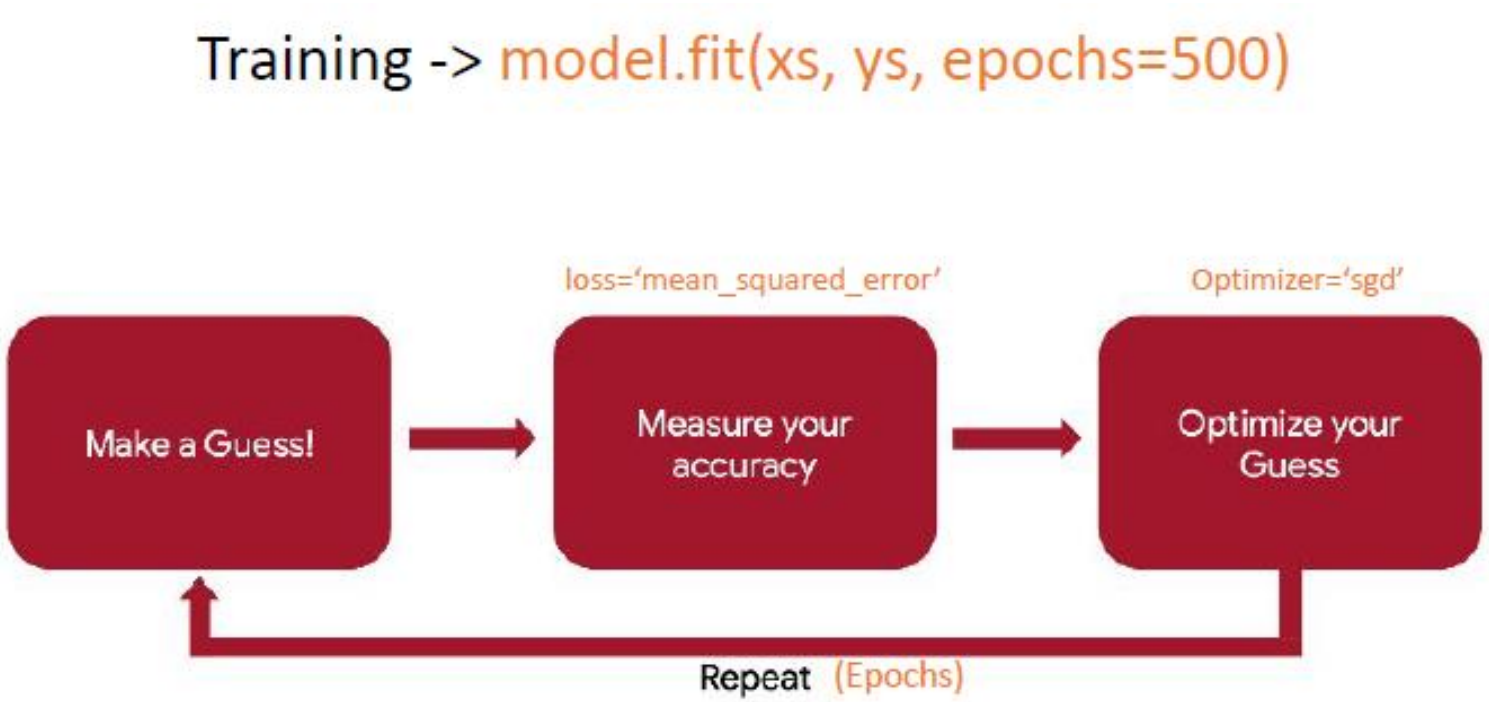

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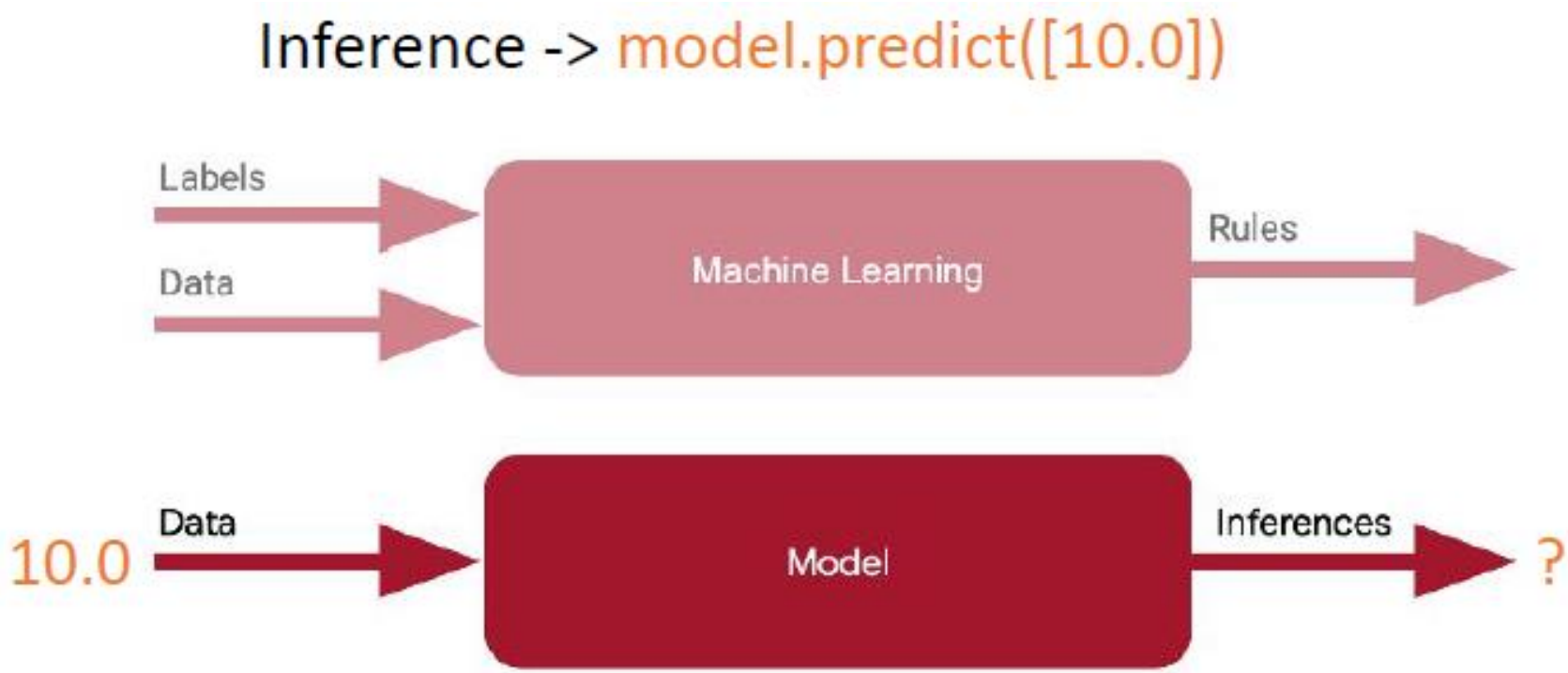

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First Neural Network with TF2

Code Time!