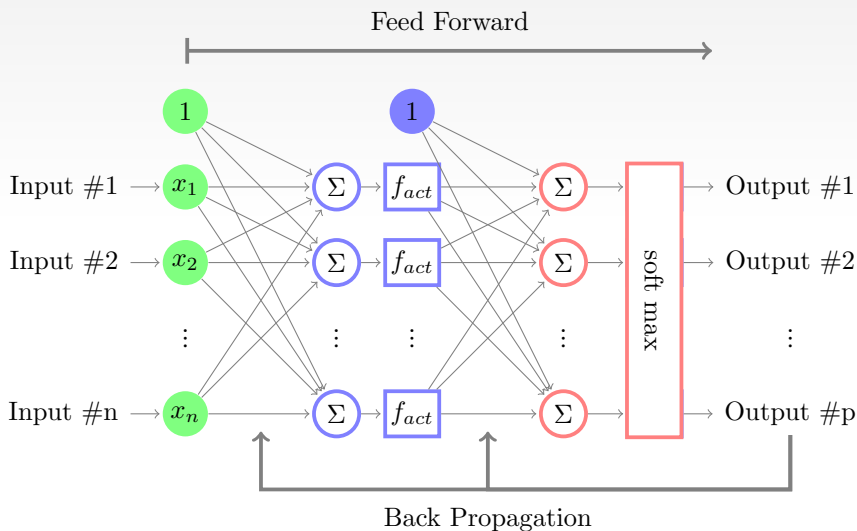


Artificial Intelligence: Modeling Human Intelligence with Networks

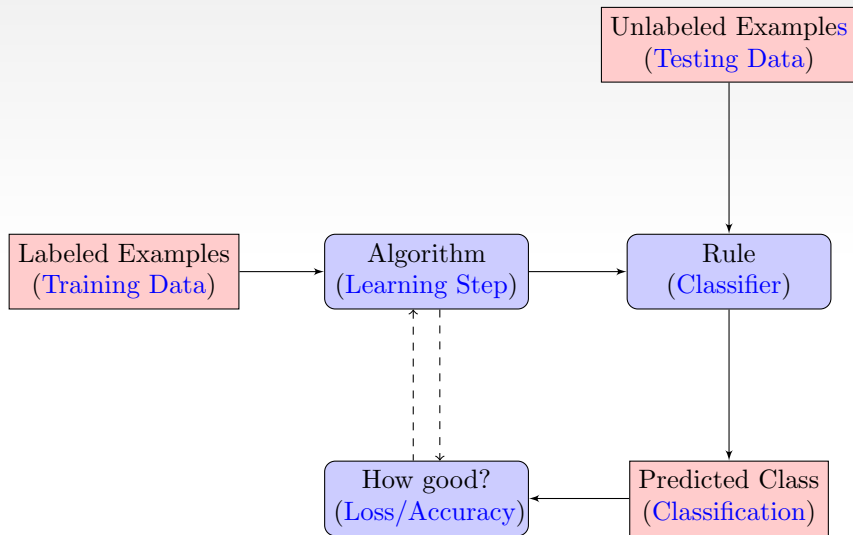
Jeová Farias Sales Rocha Neto
jeova_farias@brown.edu

A little recap

Neural Network with One Hidden Layer



Classification Pipeline



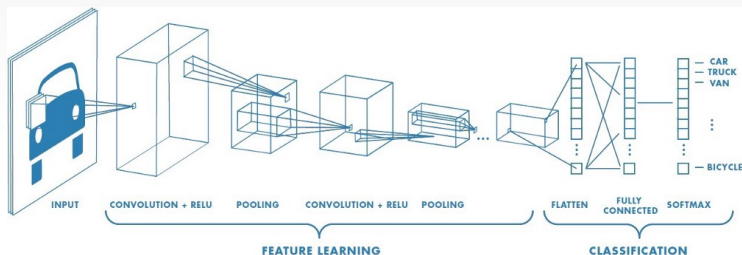
Convolutional Neural Networks

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Convolutional Neural Networks

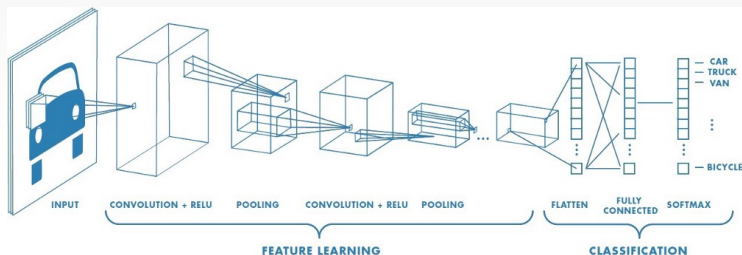
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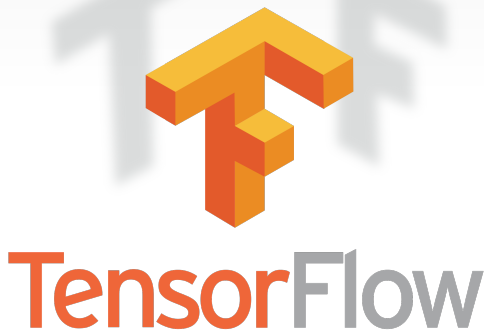
- Ok, but we are here do to programming.
- So, how do we train this whole shebang?

Convolutional Neural Networks in Python

- Thankfully, we have a Python Module for CNN's:

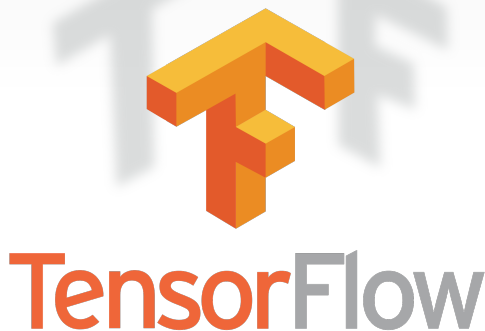
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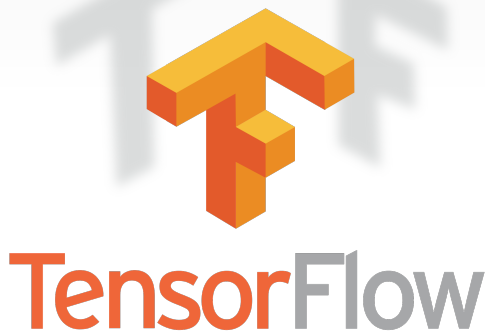
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Convolutional Neural Networks in Python

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- It was developed by Google and uses *tensors*, but don't be scared.

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- Which is built on top of Tensor Flow (ie, runs TensorFlow behind the scenes).
- It's veeery user friendly, as we'll see :)

MNIST

- Our Toy database for now will be the MNIST dataset.

MNIST

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MNIST

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- Modified National Institute of Standards and Technology.
- 70000 Handwritten Digits (0-9)!



Now,

Now, Jupyter Notebooks!
