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Introduction to Neural Networks and TensorFlow

Practice Assignment: Classification Using Deep Neural Networks

N-grams vs. Sequence Models

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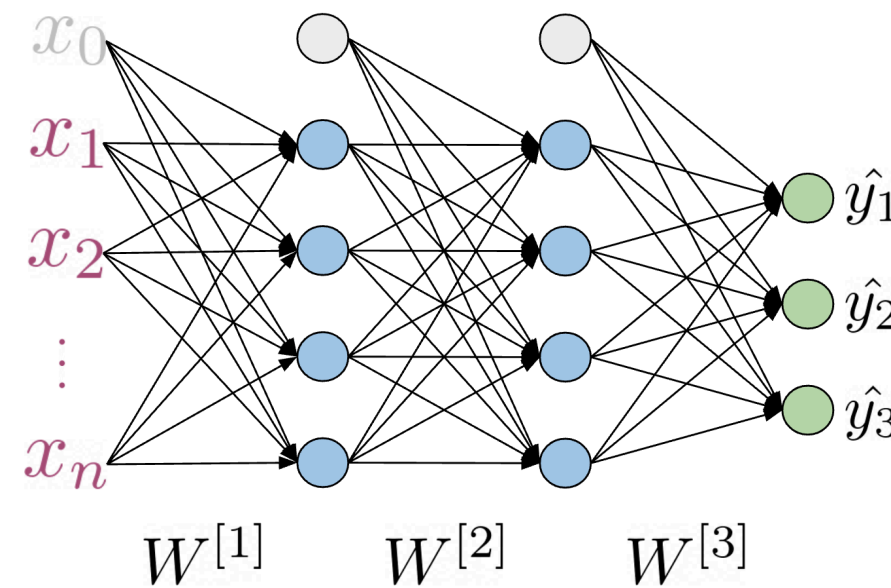
📖 **Reading:** Cost Function for RNNs

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Cost Function for RNNs

The cost function used in an RNN is the cross entropy loss. If you were to visualize it



K - classes or possibilities

$$J = - \sum_{j=1}^K y_j \log \hat{y}_j$$

Either 0 or 1

Looking at a single example (x, y)

you are basically summing over the all the classes and then multiplying y_j times $\log \hat{y}_j$. If you were to compute the loss over several time steps, use the following formula:

$$J = -\frac{1}{T} \sum_{t=1}^T \sum_{j=1}^K y_j^{<t>} \log \hat{y}_j^{<t>}$$

Note that we are simply summing over all the time steps and dividing by T , to get the average cost in each time step. Hence, we are just taking an average through time.

Mark as completed

