

# POS Tagging del Español con Redes Neuronales

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- Paper: Part-of-Speech Tagging with Neural Networks.
- Link: <https://arxiv.org/pdf/cmp-lg/9410018.pdf>
- Autor: Helmut Schmid, Institute for Computational Linguistics, Stuttgart, Germany.
- Se propone la creación de un PoS-tagger, mediante el uso de redes neuronales. La idea será crear un modelo que sirva para predecir el pos tag de la palabra actual dada una ventana de palabras anteriores y posteriores.

- Ancora 2.0
- Keras con Theano

# Pipeline

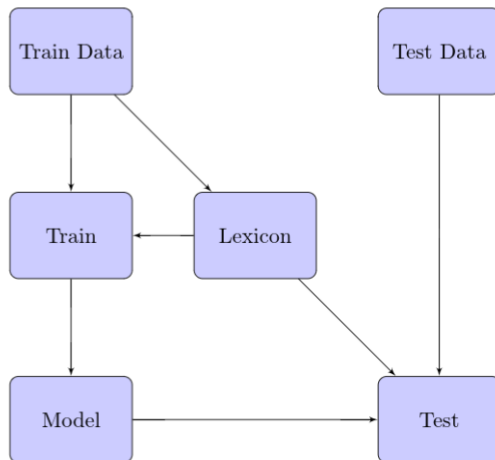


Figure 1: A 3-layer perceptron network

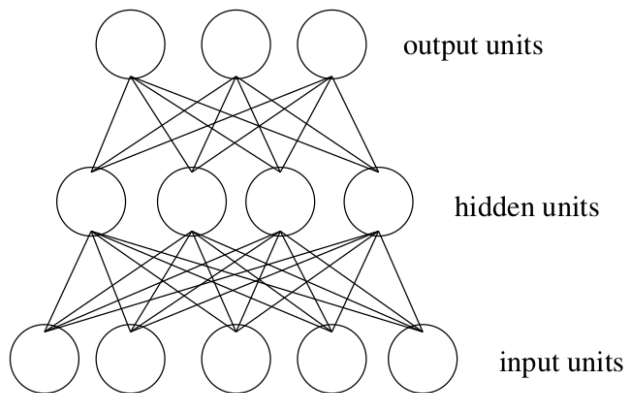
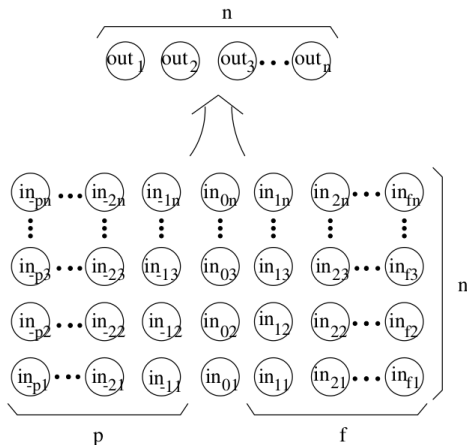


Figure 2: Structure of the Net-Tagger without hidden layer; the arrow symbolizes the connections between the layers.



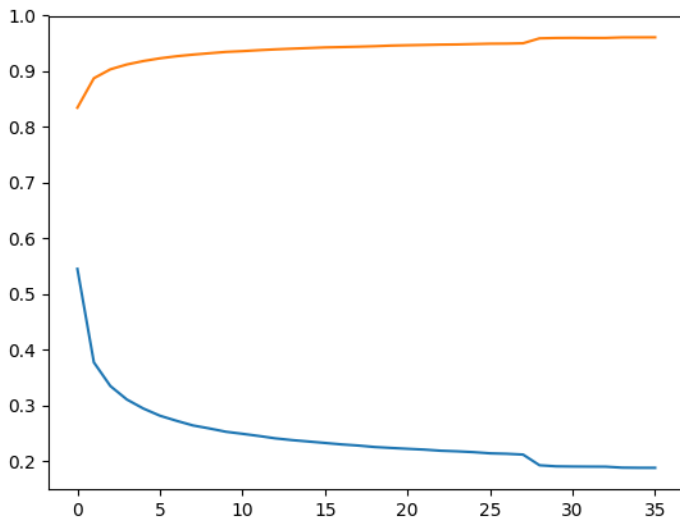
- $x_j = \sum_i a_i w_{ij}$
- $a_j = \frac{1}{1+e^{-x_j}}$  (Activación: Sigmoid)
- Cost: Cross Entropy

# Net-Tagger(Train)

- 28 epochs con  $lr=0.1$
- 5 epochs con  $lr=0.01$
- 3 epochs con  $lr=0.001$



# Net-Tagger(Train)



# Net-Tagger (Test)

<b>Accuracy</b>	<b>Accuracy onocidas</b>	<b>Accuracy desonocidas</b>
94.01	96.18	52.85

# Matriz de confusión

