Humanitas

A prediction tool for volatile commodity prices in developing countries

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Prediction Models

Echo State Networks (ESN)

Echo State Networks are a type of Recurrent Neural Network (RNN) applicable to many domains because unlike other RNNs they are easy to train.

[?] The third section explains how echo state networks can be trained in a supervised way. The natural approach here is to adapt only the weights of network-to-output connections. Essentially, this trains readout functions which transform the echo state into the desired output signal. Technically, this amounts to a linear regression task.

Echo States

For our task we need a discrete time neural network which is incidentally also the constraint in which Echo State Networks are defined. The ESN is assumed to have N input units, K internal network units and L output units. Direct connections from input to output units and from output to output units are allowed.

Training ESN