**Fahrplan ANN**

Battiti, R., 1992. First- and second-order methods for learning:

Early stopping to avoid overfitting (Nakamura, Kourentzes)

Skalieren? (Kourentzes)

Dorffner: Elman kann alle learning algorithms, backprop aber generell nicht so cool.

Burnin Phase!!

**Bilder von Dorffner**

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| Autor | Wofür | Modell | Extra |
| Adhikari | TSA | FANN (Feedforward ANN); EANN (Elman ANN) = RNN https://en.wikipedia.org/wiki/Recurrent\_neural\_network#Elman\_networks\_and\_Jordan\_networks | RBF; Ensemble mit ARIMA und SVR |
| Taghizadeh | Weather-sensitive retail products with external data | MLP (multi-layer perceptron) FANN, time-delay, bagging, RNN   * MLP am besten |  |
| Feng | Railway freight volume | DBN (deep-belief network)  Besser als SARIMA, DBN, back propagation neural network, Elman neural   * network, and radial basis function neural network | Ensemble mit SARIMA; Gaussian particle swarm optimization for DBN model selection |
| Khandelwal | TSA | FANN | Hybrid mit ARIMA und DWT decomposition in lineare und nonlineare Teile |
| Kourentzes | TSA | MLP-FANN mit LM | Ensemble; Bagging und mean-median-mode; Kombination ist wichtig für accuracy; |
| Zhou | Short-term demand for LTL carrier | Three-layer MFNN | NN-deseasonalized-detrended > ARIMA |
| Benkachcha | TSA | MLP-FANN with LM-learning algorithm | High accuracy with or without decomposition |
| Pinto | TSA | One layer FANN with LM-learning algorithm | Decomposition und dort local measures |

Kourentzes:

Apart from improving accuracy, using

ensembles also avoids the problem of identifying and choosing the best trained

network.There is a growing consensus that model combination has advantages over

selecting a single model not only in terms of accuracy and error variability,

but also simplifying model building and selection, and therefore the forecasting

process as a whole

Zhou:

However, LTL service providers mainly

serve regional clients, and the regional demand and supply can not represent national

economic activities completely. So it may have no obvious correlation between the

macroeconomic indexes and demand of LTL service providers.

Haben gute model selection tips für ARIMA

Pinto sehr gut für Theorie!