

Modeling Time Series with Hierarchical Temporal Memory

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Current artificial neural networks are capable of learning complex spatial and temporal patterns. However, as time is treated as an additional dimension some limitations are introduced. These techniques can generally learn from rather short fixed length time series, while variable length data learning would be the desirable property.

Hierarchical Temporal Memory (HTM) is a machine learning model inspired by the human neocortex. This type of network utilizes Hebbian learning and handles time series learning by having expectations about which neurons will be active in the next time step. This way long variable length time series learning is achievable. [1]

In this presentation the fundamentals of HTM will be introduced and the results of our initial experiments will be shown.

[1] Numenata - Biological and Machine Intelligence

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