A New Neural Network Architecture For Time Series Classification

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Time Series Classification (TSC) has been considered as one of the most challenging problems in data mining. TSC finds application in different fields, such as finance, medicine, robotics and physics, and it can be used mainly for: Failure prediction, Anomaly detection, Pattern recognition and Alert generation. Here we present a new neural network architecture to solve these type of problems with the same computational power but with a better accuracy.

### Convolutional Neural Network

### Echo State Network

#### New Neural Network Architecture: Convolutional Echo State Network - CESN

#### Tested with SisFall, ECG200 & ECG500 dataset