1. The article is headlined “Unsupervised real-time anomaly detection for streaming data”

2. The article is written by Numenta company. It was published in the journal “Neurocomputing” in 2017.

3. The main idea of the article is to create a novel anomaly detection algorithm for streaming, time-series data that work in an unsupervised fashion and detect unusual, anomalous behaviors in real-time, not batches. The authors’ approach based on algorithm called Hierarchical Temporal Memory and test it on Numenta Anomaly Benchmark.

4. The authors start by telling that the detection of anomalies in real-time streaming data has practical and significant applications across many industries such as IT, security, medical, e-commerce, social media, etc. They defined anomaly as a point in time where behavior of the system is unusual and significantly different from previous, normal behavior. Further, the authors say that to handle most probmlems we need an algorithm is able to makes online predicts, learns continuously, runs in unsupervised and automated fashion, adapts to dynamic environments and should make anomaly detection as early as possible. According to the text, the authors use Hierarchical Temporal Memory neural network that is a theoretical framework for sequence learning in the cortex. Advantages of this architecture are that predictions can be made in a minute that can save a patient’s life and the algorithm keeps previous patterns to adapt to new dynamics. In conclusion, the authors report results using Numenta Anomaly Benchmark and show that their approach works better than previous such as k nearest neighbor or relative entropy.

5. I find the article important because it describes state-of-the-art algorithm is able to predict and detect anomaly in unsupervised fashion.