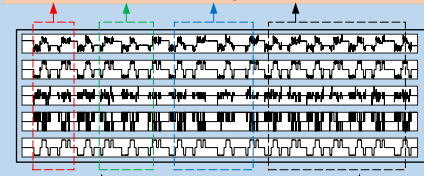
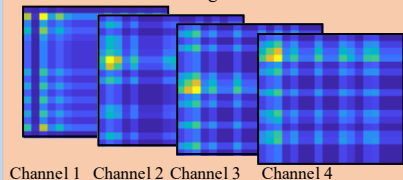


a. Cross-correlation computation

Multi-channel signature matrices



Multi-time scale sliding windows + Forgetting mechanism

b. Adversarial training

Generator

Sampling from latent space

Dense

Dense & Reshape

Deconv1

Deconv2

Fake samples + Real samples

Discriminator

Predicted label

Dense

Dense

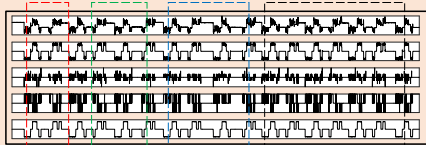
Flatten

Conv2

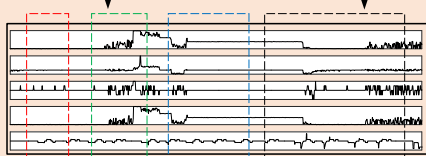
Conv1

c. Anomaly Detection

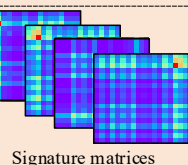
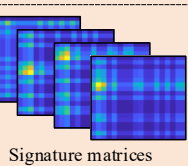
Normal multivariate time series



Multi-time scale sliding windows + Forgetting mechanism

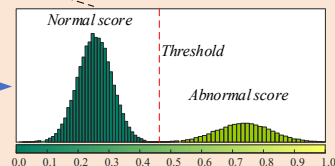


Abnormal multivariate time series



Discriminator

Threshold setting strategy using confusion matrix



Mapping signature matrices to anomaly detection score