

Output

$$\mathbf{T}_i^{output} = \{x_1^i, \dots, x_m^i\}$$

Stacked layers

H_0

LSTM
block

Hidden
states

H_j, C_j

H_1

LSTM
block

...

H_{T_l}

LSTM
block

$$\mathbf{T}_i^{input} = \{x_0^i, \dots, x_m^i\}$$

Input

anomaly = normal = 0

For all spans in \mathbf{T}_i :

If s_j^i from $\mathbf{T}_i^{output} \neq s_j^i$ from \mathbf{T}_i^{input} :

 anomaly += 1

else :

 normal += 1

$p = \text{anomaly} / (\text{normal} + \text{anomaly})$

 > threshold

return p