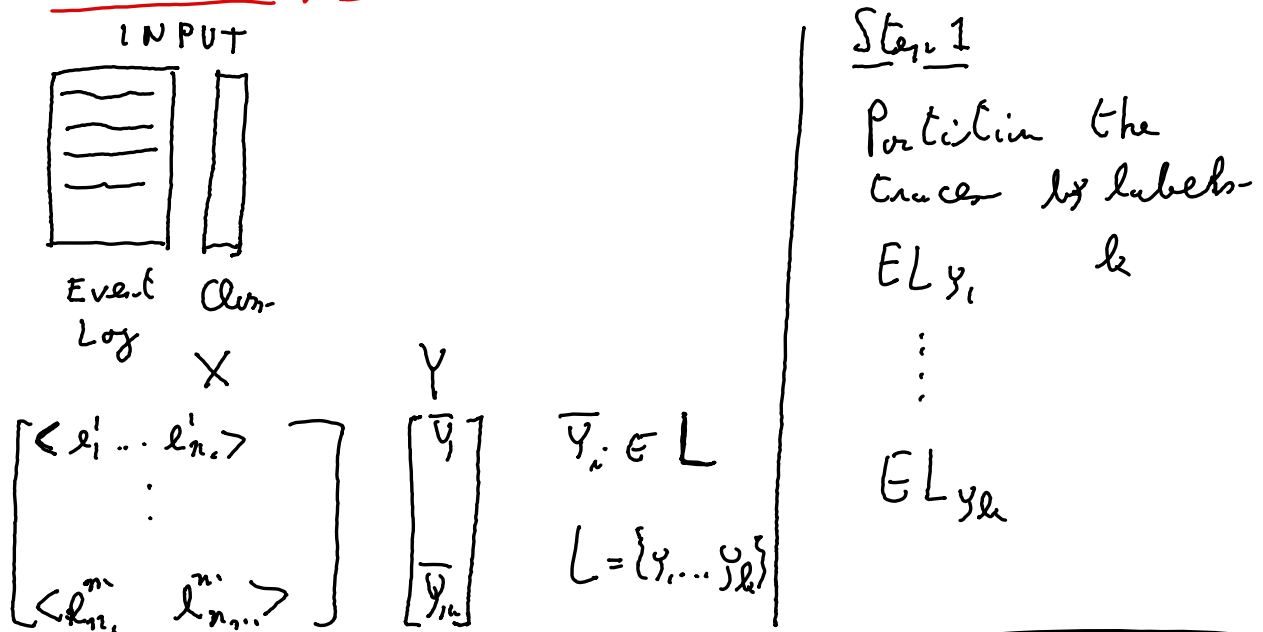


Process Mining & Conformal Prediction



Step 1

Partition the traces by labels

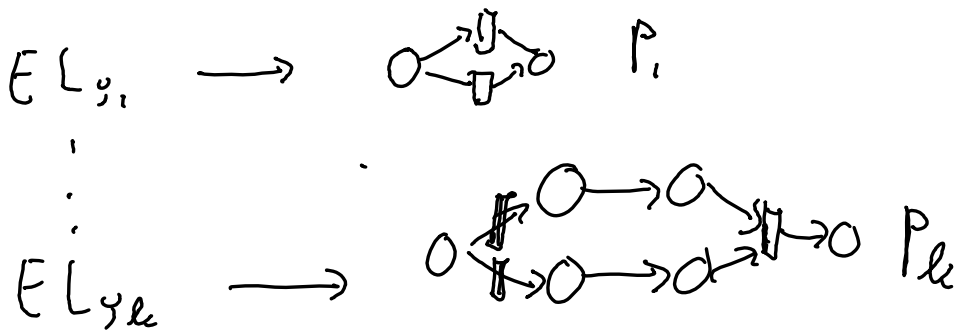
EL_{y_1}

\vdots

EL_{y_k}

Step 2

For each s compute P_s on EL_{y_s}



Step 3.a

for each s align EL_{y_s} on P_s

$EL_{y_s} \rightarrow \overline{EL}_{y_s}$

each trace in this log is never a correct computation in P_s

Step 4.a for each $t \in P_{y_s}$ initialise $N_t = 0$

for each $l \in \overline{EL}_{y_s}$ $D_t = 0$

for i, t in enumerate(l)

for $\bar{t} \in P_{y_s}$:

if \bar{t} is active at time i in l :

$D_{\bar{t}}++$

N_t++

Step 3.b

for each P_{y_k} the non-conformance function of a trace l w.r.t. P_{y_k} is the cost of the alignment between l and P_{y_k}

This is cost the cost

\gg Non-Conformance

Non-Conformance

\gg

Step 4.b

build a conformal classifier based on the non-conformance function of Step 3.b

Do either 3.a 4.a

or 3.b 4.b