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# List of Symbols

<b>Symbol</b>	<b>Description</b>
$V$	Set of univariate time-series vibration signals
$L$	Length of a single-sensor vibration sequence
$R_s$	Rotational frequency in rpm
$S_f$	Sensing frequency
$S_r$	Number of sampling points per rotation
$S_o$	Number of overlapping points in segmentation
$S_l$	Segment length
$n_s$	Number of segments
$f_n$	Frequency bands
$f_{ix}$	$i^{th}$ rotational frequency
$amp(f_{ix})$	Amplitude at $f_{ix}$
$A_{amp}$	Mean of amplitudes
$\mu(f_{ix})$	Normalized amplitude values
$\mathcal{P}$	Optimal path matrix
$\mathcal{D}$	DTW distance matrix
$\beta$	Soft-DTW smoothing parameter
$F$	Forward pass matrix of soft-DTW
$B$	Backward pass matrix of soft-DTW
$\varepsilon$	Entropy of samples
$\mathcal{F}$	Base classifier for early classification
$\theta$	class-wise confidence threshold
$\eta$	Classifier learning rate
$S$	Set of state vectors
$k$	Embedding dimension of phase space
$\epsilon$	Similarity of a state pair
$\theta(\cdot)$	Step function

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<b>Symbol</b>	<b>Description</b>
$\mu$	Fuzzy membership function
$v$	Number of clusters
$C$	cluster set
$m$	Fuzziness index
$O$	Output scores of fusing classifiers
$\tau$	Time delay for embedding
$U$	Embedding representation of transformer
$Q_u$	Query matrix
$K_u$	Key matrix
$V_u$	Value matrix
$\tilde{\alpha}$	Attention score of sensor fusion
$\hat{\alpha}$	Fault pattern matching score
$\alpha$	Final attention score
$F_{it}$	Combined feature vector