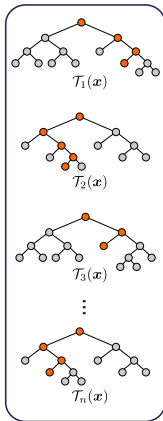


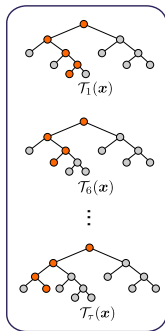
Input:

sample
 $\mathbf{x} \in \mathbb{R}^p$

trained RF
 $\mathcal{T} : \{\mathcal{T}_1, \dots, \mathcal{T}_n\}$



(tree) rule
pre-selection



map to vectors in \mathbb{R}^p

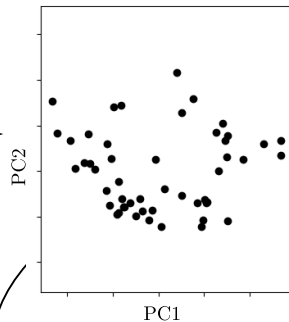
$$\mathcal{T}_1, \mathbf{x} \mapsto \mathbf{v}_1$$

$$\mathcal{T}_6, \mathbf{x} \mapsto \mathbf{v}_6$$

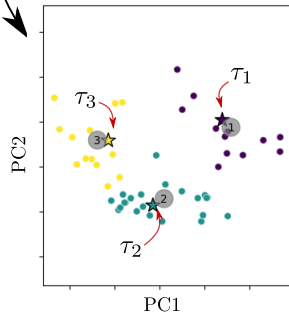
\vdots

$$\mathcal{T}_\tau, \mathbf{x} \mapsto \mathbf{v}_\tau$$

projection
(PCA)



clustering
(K-Means)



extraction
final rules
 $\{\mathcal{T}_1, \mathcal{T}_2, \mathcal{T}_3\}$

Output:

Explanation for \mathbf{x}

\mathcal{T}_{τ_1}

\mathcal{T}_{τ_2}

\mathcal{T}_{τ_3}

Rulepath 1	
Initial prediction:	0.2377
num. donations > 3.50	→ 0.3212

Rulepath 2	
Initial prediction:	0.2423
num. donation months first d	→ 0.3050
tot donated n	
months first d	
months last d	
final prediction	

Rulepath 3	
Initial prediction:	0.2454
tot donated ml > 875.00	→ 0.3448
months first donation ≤ 44.00	→ 0.5872
months first donation ≤ 27.00	→ 0.3333
months last donation > 3.50	→ 0.3750
final prediction:	→ 0.3750