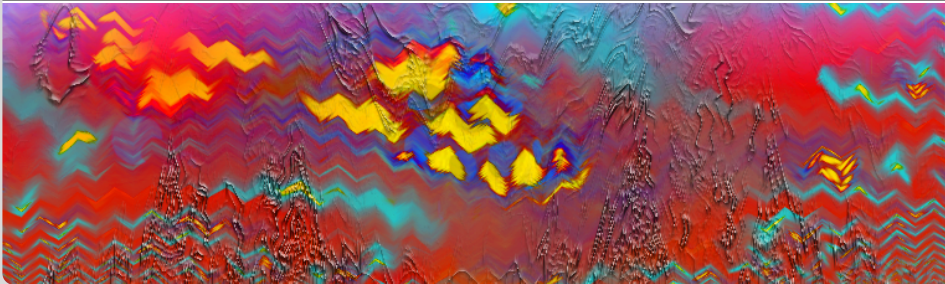# Explaining Classifiers with Prime Implicants

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eXplainable Artificial Intelligence (XAI)

- Learning: Generate inductive models from training samples
- Explaining: Deductive reasoning about about model

Explaination Queries

- Minimum Cardinality
- **Prime Implicant**
- Counterfactual

Verification Queries

- Closeness of Classes
- (Anti-) Monotone Features
- Irrelevant, Mandatory or Forbidden Features
- . . .

Audemard et al. - On Tractable XAI Queries based on Compiled Representations, KR 2020

Generate Prime Implicants . . .

. . . for Scikit-Learn DecisionTreeClassifier and RandomForestClassifier

Prime Implicants

`https://github.com/Udopia/pi-explanations`