

## Causation and Prediction Challenge: FACT SHEET

**Title:**

**Name, address, email:**

**Acronym of your best entry:**

**Reference:**

Provide a pointer to a technical memorandum or a paper (optional).

**Method:**

Summarize the algorithms you used in a way that those skilled in the art should understand what to do. Profile of your methods as follows:

- Preprocessing
- Causal discovery
- Feature selection
- Classification
- Model selection/hyperparameter selection

**Results:** The reader should also know from reading the fact sheet what the strength of the method is. To that end, we will provide a comparison table in the following format:

Table 1: Result table.

Dataset	Your entry				Entry rank				Entry num
	Causal discovery		Target prediction		Causal discovery		Target prediction		
	Fnum	Fscore	Dscore	Tscore	Fnum	Fscore	Dscore	Tscore	
REGED0									
REGED1									
REGED2									
REGEDM									
SIDO0									
SIDO1									
SIDO2									
SIDOM									
CINA0									
CINA1									
CINA2									
CINAM									
MARTI0									
MARTI1									
MARTI2									
MARTIM									

The table will be filled out after the challenge is over by the organizers. Comment about the following:

- quantitative advantages (e.g. compact feature subset, simplicity, computational advantages)
- qualitative advantages (e.g. compute posterior probabilities, theoretically motivated, has some elements of novelty).

Briefly explain your implementation. Provide a URL for the code (if available). Precise whether it is a push-button application that can be run on benchmark data to reproduce the results, or resources such as modules or libraries.

**Keywords:** Put at *least one keyword in each category*. Try some of the following keywords and add your own:

- Preprocessing or feature construction: centering, scaling, standardization, PCA.
- Causal discovery: Bayesian Network, Structural Equation Models, Probabilistic Graphical Models, Markov Decision Processes, Propensity Scoring, Information Theoretic Method.
- Feature selection: filter, wrapper, embedded feature selection, feature ranking, etc.
- Classifier: neural networks, nearest neighbors, tree classifier, RF, SVM, kernel-method, least-square, ridge regression, L1 norm regularization, L2 norm regularization, logistic regression, ensemble method, bagging, boosting, Bayesian, transduction.
- Hyper-parameter selection: grid-search, pattern search, evidence, bound optimization, cross-validation, K-fold.
- Other: ensemble method, transduction.