Causal Inference from Observational Data

Confounder Discovery from Observational Data

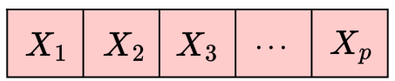
(1) Observational Data Preprocessing

Covariates | Treatment | Outcomes | Causal Effect

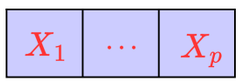
ID	X_1	$\cdots$	X_p	T	Y	Y^1	Y^0	$Y^1 - Y^0$
1	22	$\cdots$	Male	1	0	0	?	?
2	54	$\cdots$	Female	0	1	?	1	?
2	54	$\cdots$	Female	0	1	?	1	?
3	36	$\cdots$	Female	0	0	?	0	?
4	61	$\cdots$	Male	1	1	1	?	?

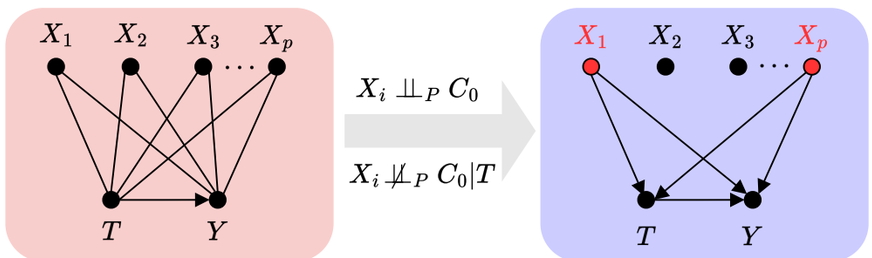
(2) Confounder Discovery (ConfounderDCI)

$X_i \in X$ (Covariates)

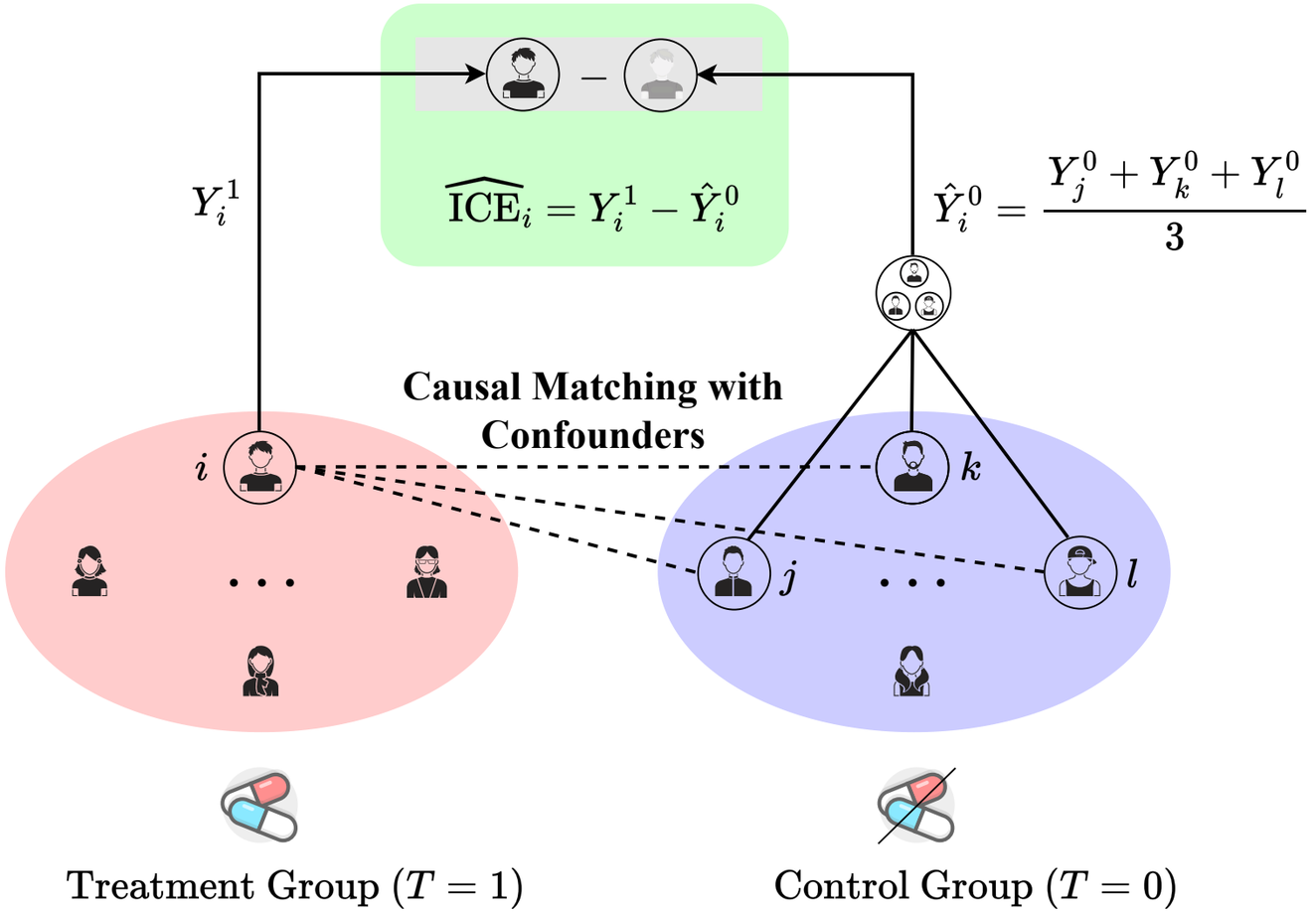


$X_j \in C$ (Confounders)





(3) Causal Inference



Propensity Score Matching Based on Confounder Discovery