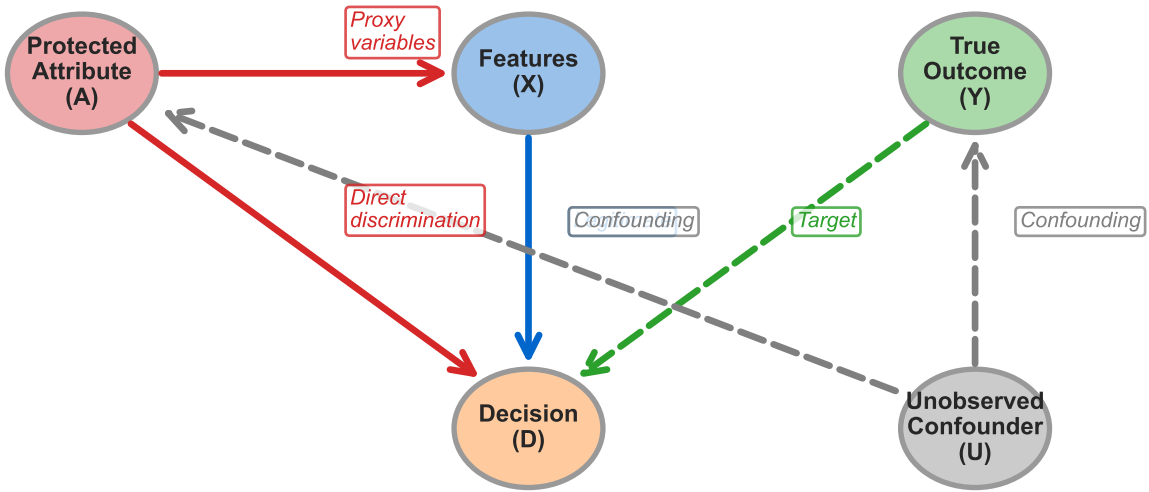
Causal DAG: Direct vs Indirect Discrimination



Direct path: A → D (red solid)

Indirect path: A → X → D (red + blue)

Legitimate path: X → D (blue, no A involved)

Counterfactual fairness requires blocking A → D and A → X → D paths