

# Machine Learning for econometrics

Reminders of potential outcomes and Directed Acyclic Graphs

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Thanks to Judith Abecassis for the slides on DAGs

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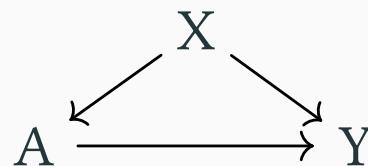
## Introduction

## Why is prediction different from causation? (2/2)

**Causal inference (most part of economists) : What would happen if we changed the system ie. under an intervention?**

## Why is prediction different from causation? (2/2)

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Causal inference models  $(X, A, Y(A = 1), Y(A = 0))$   
ie. the covariate shift between treated and control units.

### Assumption

No unmeasured variables influencing both treatment and outcome  
ie. no confounders.

# Bibliography

## *Bibliography*

## *Bibliography*

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*Supplementary material*

# DAG: Effect modifier

*Effect modifier: influences the treatment effect on the outcome.*

