Intro to Causal inference and Discovery

Introductory Course

Goal:

understand how to apply powerful causality theory to knowledge discovery

Requirements: Windows 10 or Linux Ubuntu with PyCharm Community Edition IDE with JetBrains Academy plugin installed

python 3.10 with dowhy, econml libs installed

Curriculum:

Class 1 Judea Pearl, Causality and Ladder of causation

Class 2 Regression, Observation and Intervention

Class 3 Graphical models

Class 4 Forks, Chains and Colliders

Class 5 Causal inference , d-separation, do-calculus and back-door criterion

Class 6 Modelling, estimand, estimates and refutation

Class 7 Causal Inference and and ML, Matching and Meta learners

Class 8 Advanced estimators with ML

Class 9 Deep learning for causal discovery

Class 10 Causal discovery

Class 11 Advanced Deep learning and Causality

Class 11 Benchmarks and Data fusion