



# Machine Learning & Causal Inference A Practical Approach using Python

Matias Cersosimo (matias.cersosimo.10@gmail.com)

## Requirements:

- Undergraduate Statistics & Econometrics.
- Python-capable machine.
- Ideally, agent-based IDE for coding (e.g., Cursor, Claude Code).

## Recommended Readings:

- Intro to Causal Inference w/ examples in Python: *Causal Inference for The Brave and True*. Matheus Facure
- Causal Inference Theory: *Causal Inference: A Statistical Learning Approach*. Stefan Wager
- Machine Learning Theory: *The Elements of Statistical Learning*. Hastie, Tibshirani, Friedman

## Content:

### Lecture 1: 18-Feb. Basic Elements of Coding

1. Python. Virtual environments. Basic libraries. Data loading.
2. Basic programming logic: “for”, “while” loops. “if” conditions.
3. User-defined functions. Classes.
4. Scripts vs notebooks.
5. Version control: Github.
6. AI Agents. Prompts. Good practices.