

# Gov 385L: Causal ML & EO for Social Sci

—LEARN PLANETARY CAUSAL INFERENCE—

Graduate Level, Spring 2026

TBD at UT Austin

---

## Course Description

This course introduces students to cutting-edge methods in causal machine learning and Earth observation (EO) for the social sciences. Drawing on Planetary Causal Inference research, participants will learn how satellite imagery and large-scale remote sensing data can reveal new dimensions of treatment effect heterogeneity, confounder modeling, and outcome measurement.

Through a blend of methodological foundations and applied exercises, the course examines how these tools enable researchers to understand the transportability and generalizability of causal ef-

fects across diverse geographic and socioeconomic contexts. Students will gain hands-on experience integrating EO data into experimental and observational frameworks—such as randomized controlled trials (RCTs) and natural experiments—to strengthen causal claims on topics ranging from environmental policy to economic development.

By the end, participants will be equipped to leverage planetary-scale data and state-of-the-art causal ML techniques to address emerging questions at the intersection of society, economy, and the environment.

---

## Course Details

- **Instructor:** Connor Jerzak
  - **Level:** Graduate
  - **Term:** Spring 2026
  - **Schedule:** TBD
  - **Location:** University of Texas at Austin
- 

## Guest Speakers

- Adel Daoud
  - SayedMorteza Malaekheh
  - Kazuki Sakamoto
  - Michelle Torres
  - *Others to be announced*
-