ECON 293 Homework 2: Commentary

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In this commentary I discuss results and include some key figures. Many further figures and all code are provided in the attached .html file. I worked with Luis Armona on the code. This commentary is written individually.

As in the previous homework, we use data from "Does Price Matter in Charitable Giving? Evidence from a Large-Scale Natural Field Experiment", by Dean Karlan and John List (AER 2007). In this experiment, two-thirds of recipients of a charity solicitation letter receive some kind of match-donation treatment, whereas the remaining control group receives the letter alone, with no matching promise. We use the same censoring rule as in homework 1 to eliminate observations, emulating an observational study for the first part of this homework.

1 Observational study

1.1 Propensity forest

Propensity forest. Basically just estimating prop score using a random forest. Then doing standard propensity score matching.

1.2 Gradient forest

See from slide 31 in lecture slides 6b. Get a forest based kernel from averaging tree-based neighborhoods. Local solutions. Data adaptive kernel weights.

2 Randomized trial

2.1 LASSO

2.2 Honest causal tree

2.3 Causal forest

2.4 Causal forest (Gradient forest)