Implementation of Noise-Infusion Algorithm: Example Code

This folder contains two examples of how to implement the noise-infusion algorithm outlined in the Appendix A of "A Practical Method to Reduce Privacy Loss when Disclosing Statistics Based on Small Samples" by Chetty and Friedman (2019). The three files in this folder contain the following:

Example 1 – Simple regression coefficient as statistic of interest

Implementation_guide_simple_reg.do

Stata do-file showing a step-by-step example of how to apply the noise-infusion algorithm to publicly release the estimated coefficients of a simple regression estimate of child income rank on parent income rank in each of the cells of a simulated dataset.

Example 2 – Predicted value of *Y* at a certain value of *X* as statistic of interest

Implementation_guide_p_25_prediction.do

Stata do-file showing a step-by-step example of how to apply the noise-infusion algorithm to publicly release the predicted value of child income rank at the 25th percentile of the parental income distribution in each of the cells of a simulated dataset.

Dataset

private_data_by_cells.dta

Simulated dataset in Stata format containing information on child income rank and parent income rank of 10,000 fictitious individuals grouped in 111 cells.
Variable names: parent_rank, kid_rank, cell.