Replication files for:

Chernozhukov Victor, Chetverikov Denis, Demirer Mert, Duflo Esther, Hansen Christian, Newey Whitney, "Double/Debiased/Neyman Machine Learning of Treatment Effect" American Economic Review: Papers and Proceedings 105(5), May 2017.

Please contact *mdemirer@mit.edu* with any questions/comments.

This folder contains two subfolders:

- **401K** : This folder contains the code to replicate Table 1 and Table 2 in the online appendix.
- **Bonus** : This folder contains the code to replicate Table 3 and Table 4 in the online appendix.

Each folder contains the following files.

- **Data File** : *penn_jae.dat* in Bonus *sipp1991.dta* in 401K. You can find the data sources and definitions of the variables in Master.R
- **Master.R** : This program generates the estimates reported in Tables 1-4 and calls the following two programs.
- **Moment_Functions.R** : This program contains the functions for estimating moments.
- **ML_Functions.R** : This program contains the functions for implementing the machine learning methods.

Replication Instructions:

In each folder Master.R replicates the empirical results. Note that this program replicates only the first rows (interactive model, 2 fold cross-fitting) in Panel A of the tables. To replicate other results go to line 87-97 for 401K and 104-116 for Bonus and uncomment the corresponding line.

Before running the code set the working directory to the folder where master.R is located. In addition, running the code requires users to download R packages listed in the beginning of the program.

The code is run using paralel computing on 12 cluster nodes taking 12-48 hours depending on the estimation method and number of cross-fitting folds. The execution time can be reduced by setting iteration to a smaller value(line 81 and 98).