Bootstrap selection comparison: runtime

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File structure

> the Python packages and simulation for bolasso and bsolar runtime comparison at Section 4 of the paper.

- **supporting functions**
  - **./numerical_result** : the folder of all numerical results, saved as ".p";
  - **bolasso** and **bolasso_cd.py** : the Python package "bolasso" (solved by lars and warm-start pathwise coordinate descent);
  - **bsolar_parallel.py** : the Python package "bsolar" (parallel computing);
  - **costcom.py** : the package to compute the regression error;
  - **debug.sh** : (for macOS and Linux only) the bash file for bug testing of all .py files here.
    - in Mac OS or Linux, open terminal and switch to this folder; run "bash debug.sh" commmand
    - it will produces all the test plots, results and tables;
    - if you find no error during the procedure and the bash file ends normally, there is no bug of all the packages in this folder.
  - **solar.py** : the Python package "solar";
  - **simul_built_in_parallel.py** : the simulation function for bolasso runtime by lars (using the built-in "Sci-kit learn" parallel computing scheme);
  - **simul_cd_parallel.py** : the simulation function for bolasso runtime by warm-start pathwise coordinate descent (using the built-in "Sci-kit learn" parallel computing scheme);
  - **simul_joblib_parallel.py** : the simulation function for bolasso runtime (by lars and warm-start pathwise coordinate descent, under the customized Joblib parallel computing scheme);

- **simulations**
  - **bolasso_cd_runtime.ipynb** : the simulation for bolasso runtime by warm-start pathwise coordinate descent (using the built-in "Sci-kit learn" parallel computing scheme);
  - **bolasso_lars_runtime.ipynb** : the simulation for bolasso runtime by lars (using the built-in "Sci-kit learn" parallel computing scheme);
  - **bsolar_runtime.ipynb** : the simulation for bsolar runtime (by lars and warm-start pathwise coordinate descent, under the customized Joblib parallel

computing scheme)
- **runtime_plot.ipynb** : the plotting script for runtime comparison graph.