Description of Code
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The code can be difficult to parse so I have given a brief overview of all the code in this file. For a more detailed explanation of the code, read the comments within each R script.

ART.R This is the main function that completes the adaptive resampling test. This function also calls findlambda which will find the lambda value to use for each bootstrap sample using a double bootstrap. The function calls bbv.R in order to calculate $\mathbb{V}_n(\mathbf{0})$ when necessary. This function calls `get_max_beta.R` to calculate the maximally correlated beta parameter.

bbv.R This function calculates $\mathbb{V}_n(\mathbf{0})$ for the functions inside ART.R script.

`find_limit_distr.R` This script gives functions used to give the sampling distribution of $\hat{\theta}_{\hat{m}}$ under local alternatives. This sampling distribution is then used to estimate the power for figures 4 and 5.

findlambda.R This funciton completes a double bootstrap and returns the λ_n found to give the best asymptotic power, while maintaining proper type 1 error control. This function calls sortlambda.R in order to find the best λ_n after the second layer of bootstrap is taken.

`get_max_beta.R` This function is used to calculate the maximally correlated beta parameter. While built in functions in R can do this, this function strips out all the unnecessary parts, and runs faster than built in R functions.

`read_data.R` This script gives the code used to read the test results back into R, and create the visualizations for the finite sample behavior simulations (figures 1, 2, and 3).

`read_data2.R` This script gives the code used to read the test results back into R, and create the visualizations for the asymptotic behavior simulations (figures 4, and 5).

`real_data_example.R` This is the script used for the application section of my paper.

`Sim_Study.R` This script contains the code used to generate data for the finite sample simulations (figures 1, 2, and 3).

sim.local.R This script contains the code used to generate data for the asymptotic behavior simulations

(figures 4 and 5)

`Simulate_1.R` This function calls all of the different test functions ART.R, and Testing.R to run a single test for each kind of test with a given set of data. This simulation function was used to give estimates of rejection rates in figures 1, 2, and 3.

`Simulate_2.R` This function runs a single power estimation procedure using the methods outlined in the the asymptotic power section of the paper. It was used to give estimates of rejection rates in figures 4, and 5.

sortlambda.R This function helps to find the λ_n found using a double bootstrap. To be more detailed, this function takes in all of the bootstrap values for both $\mathbb{V}_n^{\#}(\mathbf{0})$ and the center percentile bootstrap, along with the t values for each bootstrap draw. It then orders these observations and finds the λ_n such that $\hat{\theta}_n^{\#}$ (the estimate of the most correlated predictor's beta coefficient for the first layer of bootstrap) is as close to being in the 95% percentile as possible.

`submit_sim_1.R` This script is used to run a single test using `simulate_1.R` . This script was created so the simulations could be run on the clusters.

`submit_sim_2.R` This script is used to run a single rejection rate approximation using `simulate_2.R` . This script was created so the simulations could be run on the clusters.

`submit_sim_3.R` This script is used to run a single test using `simulate_1.R` . This script was created to make sure that `submit_sim_2.R` and `Simulate_2.R` were working properly. I used this script to approximate power for two simulation settings to see if they were consistent with the `simulate_2.R`. While the results of this simulation did match the results found using `submit_sim_2.R`, they do not match what was found in the paper. Testing.R This file was used to define all of the tests outside of the adaptive resampling test.