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Linear Programming Benchmark

- For the final project, we wanted to explore linear programming as a real-world technique to solve optimization problems involving large-scale computing. We looked at the minimum-element problem explored in class, and asked, *can we improve the greedy solution to the minimum-element problem using linear programming?*

- To answer this question, we created a robust simulation suite written in Python, which runs the randomized games over and over again and compares the results of the greedy algorithm vs the greedy algorithm augmented by linear programming.

- We examined empirical improvements to the greedy algorithm for the minimum-element problem. In particular, we determined that rounding a covering program as the start solution to the greedy scheme tended to produce more accurate results, by about 20%.

- Please see our README.md for instructions on how to run this locally and see results for yourself.