Housing prices have gone up over the last few decades. People are not able to afford them and are stuck living on the streets.

Our plan is to use the Simplex Method to figure out the best prices for houses depending on how many people are going to live in these houses, availability, location, and other factors while those selling the house don't lose too much money and also figuring out why housing prices right now are too high.We will be doing this on a supercomputer using C++ which will allow us to run more than one instance of our program at once and run it more efficiently using parallelism.

The first thing I did was practice doing row echelon form and the simplex method on paper with some practice problems before starting on programming. Then I wrote a program that would do reduced row echelon form that checks if the answer it gave was correct. to solve equations. That would be the basis for the simplex method that I wrote later. Right now we have a python program that can do the simplex method for two variables. We will later have it do more variables and then convert this to C++ so that it can run on a supercomputer to have data come in faster.

We expect to get housing prices that are lower and more affordable than the current ones and information that tells us what makes the price or a house go up or down. This won't make everyone be able to afford a house as factors like low minimum wage and availability of houses but it is a step in the right direction.

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