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Conway

From what I’ve seen, there is a single “stable” 3-cell life form, one that switches between (2,1),(2,2),(2,3), and (2,1),(2,2),(2,3). Of the still life forms, all are at least 4 cells. There is a box, which is just 4x4 full cells. There is also another form, which is (2,2),(3,1),(3,3),(2,4).

There is another common form that is similar to the second 4-cell form, which has a total of 6 cells with two on one pair of sides, and one on the other pair. Similarly, there is another form that has 2 cells on each side, for a total of 8.

The double eye, a common arrangement of pieces in the game Go, is also a stable form. And interestingly, all Tetris blocks except the line are all semi-stable.

I then created a program that finds the average number of cell alive on any turn. This allows me to test mathematical models, like the one I submitted on paper, for how well they model Conway’s Game of Life.