Game Of Life Reflection

The single biggest challenge that I had with this assignment would be 2D Arrays. My experience with 2D arrays is very limited, so that contributed to my lack of confidence in this project. Although, once I got the hang of 2D arrays, things weren’t so bad.

Once I learned about 2D arrays, the next big challenge was using the 2D array to find the positions of the cell neighbors. This was mostly challenging because of my lack of knowledge of 2D arrays. It probably took the most time to figure this out accurately.

It was very satisfying to finally figure this out and be able to make a grid where the cells knew about their neighboring cells. I am picturing games that I could now make with this new skill.

The next biggest challenge was the game of life rules themselves. The rules are simple, but it was deceptively challenging to get the program to work properly. I was making big progress until I realized that, while I was able to do the still lives, my oscillators and gliders were not working at all. This took me several hours to solve, combing through all my code and making sure I was doing the calculations on the future generation and not the current one. It turns out the problem was that my bool was incorrect for reproduction. Such a silly mistake cost hours.

At the time of writing, I was not able to implement a dynamic array as a UI element in the same scene. I believe it would be easy to do it in a separate scene, and then carry forward. But I currently running into a lot of out of array bounds issues trying to do it dynamically.  
  
Another unexpected challenge was when building the project, I couldn’t figure out why my game was running way faster than my simulation speed of 4 FPS that I thought was hard capped. Turns out VSync was the answer and turning that off allowed Unity to force the 4FPS frame limit onto my computer. So, that was nice to learn.