**Narrative**

The project was a fun introduction into working with the Uno and LEDs.

I struggled a bit with working out my idea. At first, I wanted to make a connect-four game with the LEDs by creating a matrix.

Vaughn talked to me about using Charlieplexing to create a matrix of individual controllable LEDs and work with that. I looked up examples on the internet and tried to work them out myself but for some reason I couldn’t get it working as intended and asked for some help. The answer to my problem would be soldering the LEDs, my kit didn’t include anything to do that, so I turned to multiplexing instead. It is achieved in a different way but still got me where I needed to be.

After fitting on 9 LEDs in a matrix I quickly ran out of space on my breadboard. That made the idea of making a connect-four game go out of the window. If I had used a matrix PCB I would have been able to do this far more efficiently but at the time I did not have one.

I thought of maybe making a snake game with the LEDs on the breadboard but that wouldn’t be fun to play as the playing field was rather small. Instead I used 2 buttons to turn on and off lights to show that I had full control over each LED individually.