I first encountered Minecraft when I was 5 years old. It was in the year 2013, when Minecraft Pocket Edition had just been released. Initially, I spent a lot of time mining and building houses. Then, during one mining session, I discovered a type of red ore. This ore emitted a faint glow as I mined it. When the block was broken, a powder of red dust named “Redstone” appeared in my inventory. At first, I thought it was just the same as ores such as diamonds, emeralds, etc. However, when I tried to craft an armor using Redstone dust, It does not work as I thought: it can’t be used as tool or weapon material. Then I thought: okay, so how can I use it? Then I found out that it can be turned into a torch, but the light it emits is way weaker than the normal torch. “A thing can’t be so useless,” I thought, “There must be some other function of Redstone.”

By chance, I discovered that redstone dust could be placed on the ground and would light up when there were redstone blocks or pressure plates nearby. This made me ponder: Could the properties of redstone switches be similar to the 0s and 1s we use in our computers every day?

From that day on, I became obsessed with researching redstone and its properties.

Over time, my fascination with Redstone grew. I delved into the workings of Redstone, exploring its limitless potential. I learned how to use different Redstone components and logic gates, crafting simple circuits and mechanical devices. These initial attempts captivated me, igniting a desire to continue my exploration.

With my knowledge and skills constantly improving, I started taking on more complex Redstone projects. I built automated farms and mines, utilizing the properties of Redstone to automate the processes of planting and mining. I even designed an intelligent torch-switching system, allowing remote control over the lighting throughout my base. These creations instilled in me a strong belief in the potential of Redstone technology.

However, my pursuit of Redstone technology did not stop there. I yearned to tackle more advanced projects, pushing the capabilities of Redstone to their limits. Thus, I made the decision to design and construct a graphing calculator. I delved deep into the study of redstone logic gates and circuits, combining them to create a Redstone circuit capable of performing basic calculations.

My graphing calculator operated on the principles of binary, with different logic gates and storage units interconnected by redstone lines. I used redstone torches as storage units, manipulating their states to represent different numerical values. Redstone repeaters were employed to control the delay and transmission speed of electrical signals.

The graphing calculator I built was capable of executing fundamental arithmetic operations such as addition, subtraction, multiplication, and division. By connecting logic gates in a specific sequence, I achieved these functions. For instance, I used redstone logic gates to create an adder, which added two values together and produced an output. I also designed multipliers and dividers, leveraging the combination and delay properties of redstone circuits to carry out complex mathematical operations.

In addition to basic arithmetic operations, I conducted experiments with image processing using the graphing calculator. I wrote simple redstone programs to simulate convolution operations on images. I used a 20\*20 Redstone Lamp to serve as my screen, and use

Designing a convolutional neural network proved to be an immensely challenging task. I invested significant time and effort into studying how to map concepts such as neurons, convolutional layers, and pooling layers into redstone circuits. Leveraging the logic gates and delay properties of redstone, I successfully constructed a simplified version of a convolutional neural network. Although this network had limitations in handling complex image tasks, it remained a remarkable achievement within my Minecraft world.

My graphing calculator and convolutional neural network not only allowed me to experience the boundless potential of redstone technology within Minecraft but also reinforced the importance of creativity and a research-oriented mindset. Through my obsession and exploration of redstone, I discovered that even within a virtual world, I could utilize my imagination and technical knowledge to create remarkable achievements. The graphing calculator and convolutional neural network within my Minecraft world became a testament to my creativity and passion, providing me with endless joy and a sense of accomplishment.