I read the blog *Deep Learning Part 1: Understanding Basic Neural Networks* on Medium, and it gave me a very clear introduction to how neural networks actually work. The article starts with the motivation for neural networks, explaining that traditional algorithms struggle when data becomes too complex or when there are hidden patterns that aren’t easy to hand-code. Neural networks are designed to learn these patterns automatically, which is why they are so powerful.

One of the key takeaways for me was how the blog broke down the structure of a neural network into layers – input, hidden, and output. I already knew the idea of inputs and outputs, but the explanation of hidden layers made it click for me. Each hidden layer takes the previous information, transforms it using weights and biases, and passes it through an activation function. This “stacking of layers” is what allows networks to capture non-linear and abstract relationships in data. The blog also highlighted the role of activation functions like sigmoid and ReLU, which was interesting because I had always seen them in code but never fully understood why they were necessary.

Another part I found useful was the step-by-step description of forward propagation and backpropagation. Forward propagation is about passing inputs through the layers to get an output, while backpropagation is the process of correcting the errors by adjusting weights. The way it was explained made the learning process of a network feel less mysterious and more logical.

What stood out to me overall is how neural networks are inspired by the human brain but still work in a very mathematical way. This connects well with my own interest in machine learning, because I can now see how concepts like gradient descent and loss functions fit into the bigger picture. The blog was simple yet detailed enough to give me both intuition and technical understanding, and it definitely motivated me to explore deeper into deep learning.