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In the recent workshop on machine learning, I worked on a project about image classification. The main goal was to build a model that could tell the difference between images. To do this, I used a special type of machine learning method called convolutional neural networks. These are very good at recognizing patterns in pictures. Another technique I learned was transfer learning, which helps us use pre-trained models to make the process faster.

Throughout the workshop, I ran into some issues while working through the code. One of the first problems I had was with the size of the images going into the model. I got an error because the size didn’t match what the model was expecting. It took some time, but I figured out that I needed to change the input size. Once I fixed that, the model was able to run properly.

Another challenge came from understanding the structure of the neural network. The model we were using was called MYSKYNET, which has several layers of neurons. At first, I wasn’t sure how the data moved through each layer or how to make changes to improve the model’s performance. But after trying a few different setups, I learned how to adjust the layers to make the model better. It was a good learning moment because it showed me how small changes can make a big difference.

One of the coolest things I learned was transfer learning. This method lets you use a model that’s already been trained on a big dataset and fine-tune it for your own project. This saved me a lot of time, and it was much easier than starting from scratch. Transfer learning is a trick I’ll definitely use in the future.

As I worked through the project, I started thinking about how this type of technology is used in real life. For example, CNNs are used in healthcare to help doctors analyze X-rays and find diseases faster. They’re also used in things like self-driving cars to detect pedestrians, street signs, and other objects. This helped me see how what I was learning can actually solve real-world problems.

Overall, I found the workshop to be both challenging and rewarding. At first, I was frustrated when things didn’t work, but by fixing the problems and continuing to work through the code, I learned a lot. I now understand the importance of details, like making sure the input data is the right size and making small changes to the model to improve its performance. I also feel more confident in troubleshooting and making adjustments to code.

This experience gave me a good understanding of machine learning and image classification. It also opened my eyes to the many ways this technology can be used in the real world. I’m excited to continue learning and apply these skills in future projects. This hands-on workshop made me feel more comfortable working with machine learning models, and I’m eager to keep improving.

**References** [Copy\_of\_workshop\_1.ipynb - Colab (google.com)](https://colab.research.google.com/drive/1tEX7R4CqolNYKYVWr0mOKkR4uqmyDJsh)

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