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L05 Image Classification with SVM

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Learning about SVM and Images

Before this lab, I knew little about Support Vector Machine (SVM). After using this method for classification, I learned a little more on how SVM works. Preparing the images was interesting because it made me think about how to set up the codes to execute particular results. This showed me how important it is to understand your pictures before you try to use them in a model.

At first, I struggled on how to use SVMs to identify the pictures of the cats, dogs, and ships. This made me think how I needed to use this model. Working with a lot of data was hard, but using a smaller subset of data helped. This taught me that you have to choose between how complicated your data is and how well your model works. The lab helped me understand that fixing up your data is just as important as the model itself. Making the data simpler can make training faster, but it can also limit what the model can learn. Besides pictures, I can see how SVMs could be useful for other things with a lot of data, like sentiment analysis, spam detection and topic modeling. This lab helped me see that SVMs can be very useful for certain things, especially when you need to be fast.

This experience will definitely change how I do things in the future. I now know that it's important to pick the right model for the problem, instead of just using the most complicated one. In the future, I'll probably try simpler models like SVMs first to understand the data better before using deep learning.

Some key things I learned was how you prepare your data is really important. Making pictures simpler helped without losing too much. Deep learning isn't always the best. SVMs can work well for simpler things. Understanding limitations is important. SVMs are good at handling a lot of data, but they have problems with pictures.

In conclusion, this lab showed me that SVMs can still be a helpful tool. You don't always need the most complicated thing. The most important thing is to prepare your data carefully and choose the right model.