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**Final Training Results:**
I am currently still in the process of training my final models. I am quite late with my submission but I will explain all my roadblocks in the next few lines. My dataset Is extremely large with approximately 150000 images. While transforming the stroke data into real images I initially came up with images of size 2,000 by 1,200. They were way too large and I couldn't do anything in colab without it crashing (saving files, iterating through loops). I then tried to just shrink the images but then after looking at the end result I realized that the images would be way too small for a good accuracy. Then I decided to crop the images. But while trying to crop the dataset I realized another problem. For some reason some of the image coordinates were negative. It is impossible to crop from one negative coordinate to another. So when I tried to crop the images some of them turned out to be all black. I tried to fix this but in the end I ended up removing all of those images. Doing all of that took me a little while. When I was finally able to save all that data and shuffle it in the same manner I thought I was good to train. But while training my first model I realized I had another large problem. My dataset class labels were wrong. I had inputted 1370 classes into the machine learning model because that was the last label of my type of images. But when I looked at it again I realized that my labels didn't start from 0 and weren't continuous. For example the first label was 31 and after the labels for the alphabet were up then the numbers skipped to 100 and so on. I ended up having labels ranging from 31-1370 but I only had 369 classes. I had to manually create a dictionary that would map all of those labels to continuous labels from 0-368. I then had to create a second dictionary to map from the numbered labels to the actual labels of the symbols such as (A, therefore, uparrow, etc.). Then I trained a few more models and I got a highest accuracy of 67%. But that was not good enough for me so I tried a few more modifications but then I encountered a problem. My colab instance kept shutting down because training was taking too long. I would train all day and then it would shut down on the last epoch. This would waste my entire day and then I had to restart the next day with some adjustments. After a few days with this problem I am currently trying to figure out how to work google cloud in order to be able to train larger models. With the whole virus situation this has taken way longer than I expected. I will try to finish my best model in the next few days.

**Final Project:**
For my final project I was hoping to do a web page where you can draw a handwritten symbol on the screen and my algorithm would recognize it and print out its label. I will look at the new final project format and see if that is still possible.

**Current Code:**
I am submitting my current google colab code but my final model is not ready yet unfortunately.