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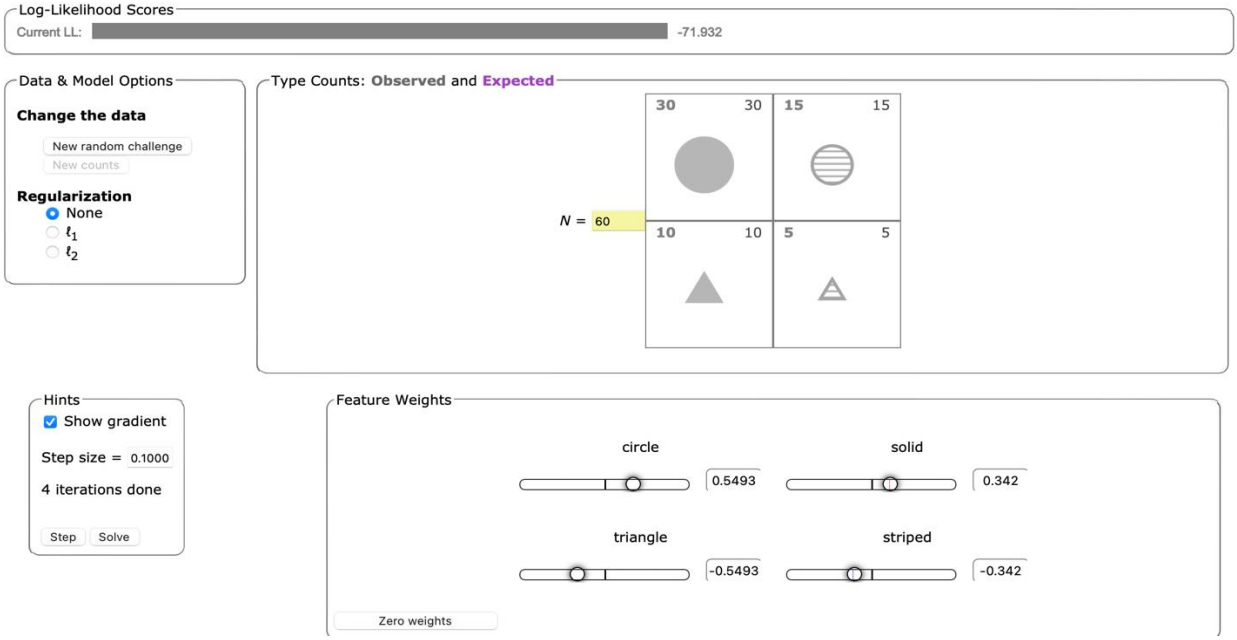
Problem 1

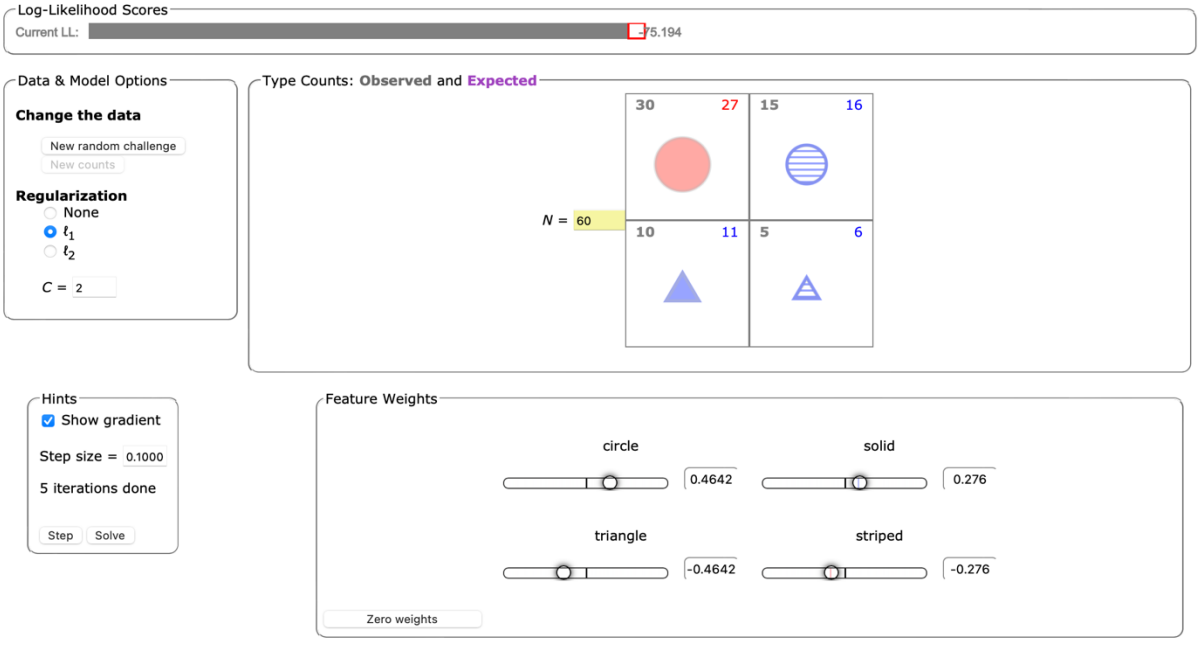
A. This causes the expected count to stay below the observed for both ‘circle’ but increase above observed for ‘triangle’, until about ~1.11 which then reverses the roles of the expected count.

B. The red bar shows a decrease in the expected count and blue bar represents an increase in the expected count.

C. When solve is selected



D. When regularization l1 is selected.



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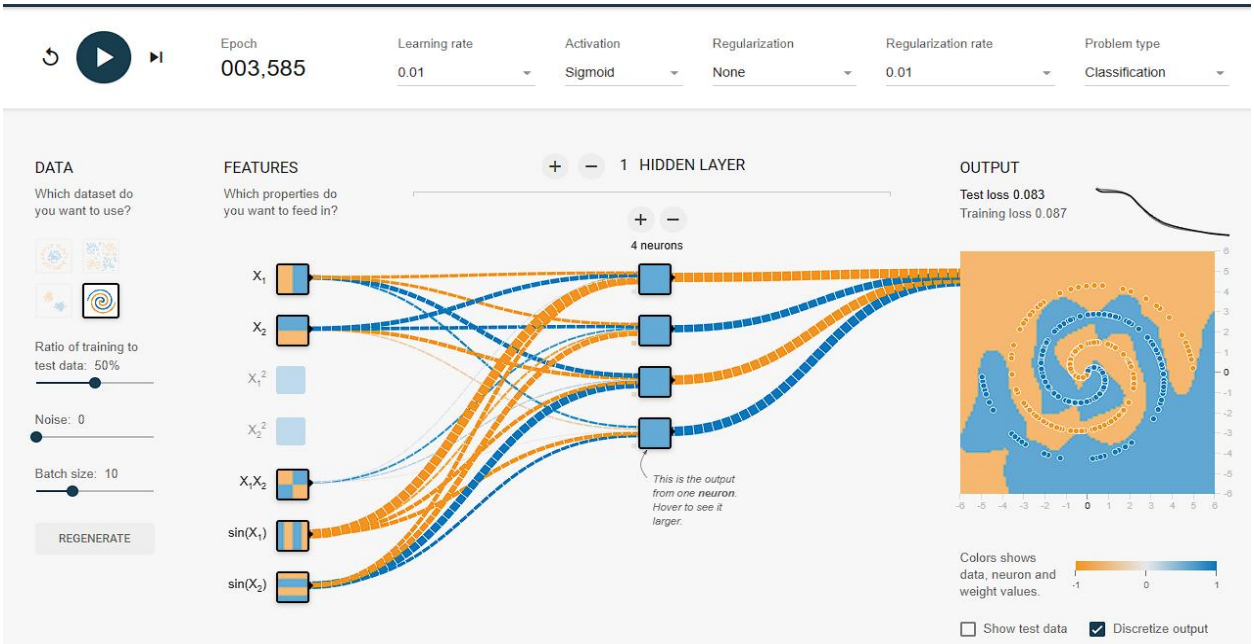
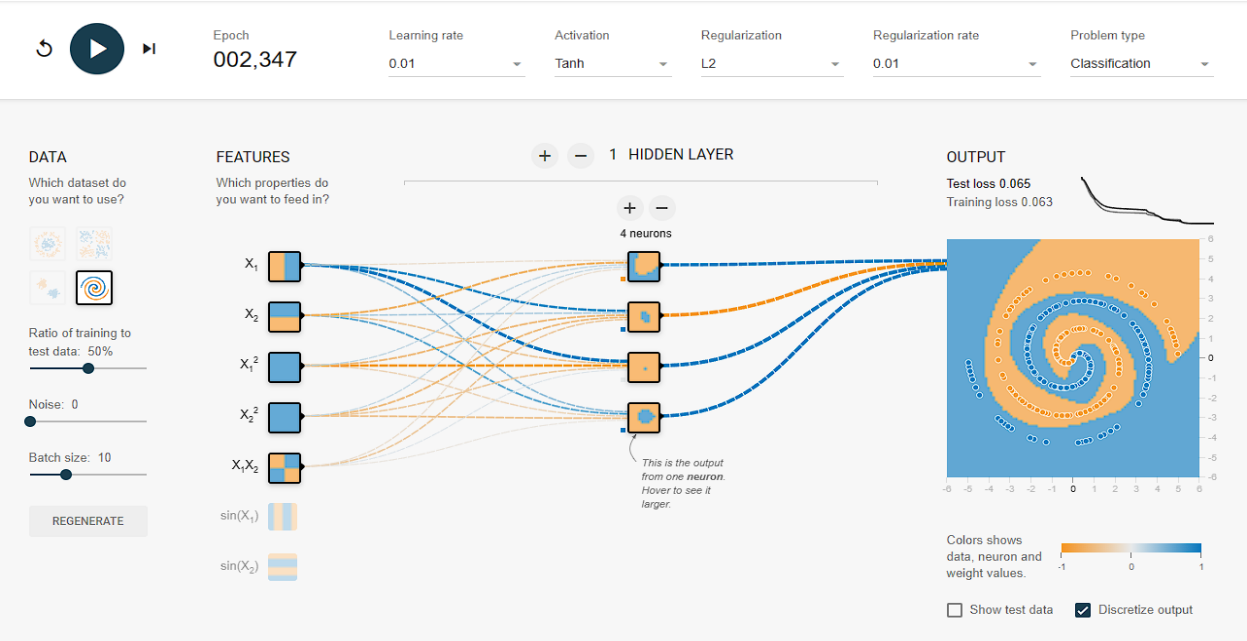
E. This is due the regularization of the model which helps reduce the over and underfitting of the previous result.

F. Z ensures that the value we calculate does not exceed 1 meaning, allowing our result to be bounded between 0 and 1.

Problem 2



➔ Adding regularization should both lower the number of epochs and training/test loss



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Problem 3

A. Kernel Size: 3x3
   Stride length: 1
   Maxpool window size: 2x2

B. This CNN only has two animals to compare against and so it seems fair to assume it would try to find a features that are similar. Thus, I believe this says that class ‘Espresso’ contains features that closely resemble those of the features identified in the ‘Coyote’ and ‘Rattlesnake’ classes.