

CI Project Test: SP\_Large-Scale\_Counterfactual\_Training\_for\_Object\_Classification  
Results

Class Accuracy

input channel	plane	car	bird	cat	deer	dog	frog	horse	ship	truck
all	75.5	87.7	55.1	58	72.7	60.8	77.9	79.6	83.9	70.7
red	70.1	70.6	53.3	56.1	61.3	54.1	76.7	79.6	74.6	75.5
green	64	78.8	64.1	53.2	60	54.6	83.5	75.8	80.2	78.2
blue	70.7	78.9	53.2	66.4	62.7	54	76.8	70.3	79.2	80.5

Plane: Accuracy of using only green channel is lower than other 2, so the other 2 channels have better feature representation for this class. Using all channels gives the best accuracy.

Car: Accuracy of using only red channel is lower than other 2, so the other 2 channels have better feature representation for this class. Using all channels gives the best accuracy.

Bird: Accuracy of using only green channel is noticeably higher than using all channels, so the green channel has the best feature representation for this class and using green alone gives the best classification accuracy.

Cat: Accuracy of using only blue channel is noticeably higher than using all channels. So, the blue channel has the best feature representation for this class and using blue alone gives the best classification accuracy.

Deer: No significant difference in accuracy when using individual channels, using all channels give the best accuracy. So, no individual channel has significantly better feature representation than the others.

Dog: No significant difference in accuracy when using individual channels, using all channels give the best accuracy. So, no individual channel has significantly better feature representation than the others.

Frog: Accuracy of using only green channel is higher than using all channels, so the green channel has the best feature representation for this class and using green alone gives the best classification accuracy.

Horse: Accuracy of using only red channel is higher than other 2 and is the same as using all channels. So, the red channel has better feature representation for this class than the other 2 channels.

Ship: Accuracy of using only green channel is higher than the other 2, so the green channel has better feature representation for this class than the other 2 channels. Using all channels give the best accuracy.

Truck: Using the individual channels for this class gives better accuracy than using all channels. So, all channels have good feature representation individually but when combined, lowers the classification accuracy. Among the 3, blue channel has the best feature representation.