

Top 1 Accuracy & Top 5 Accuracy

→ We test the model on 5 images and get the following results.

#	True Label	Predicted Label	Top 5 Predicted Labels	
1	cherry	cherry	orange, blueberry, apple, strawberry, cherry	✓
2	raspberry	strawberry	raspberry, apple, strawberry, orange	✓
3	blueberry	blueberry	blueberry, orange, apple, strawberry, cherry	✓
4	strawberry	apple	apple, orange, raspberry, blueberry, cherry	✗
5	apple	strawberry	strawberry, orange, raspberry, blueberry, cherry	✗

→ Given this example, our model predicted correctly 2 images and the true label turns up 3 times in the top 5 predicted labels.

What is Accuracy?

→ Accuracy is the number of samples that are paired divided by the number of samples.

Accuracy = No of correct predictions / Total no of correct predictions

→ For example: If accuracy comes out to 91%, it means that 91 correct predictions out of 100 total examples.

Top-1 Accuracy

→ Top-1 accuracy is the conventional accuracy, model prediction (the one with the highest probability) must be exactly the expected answer.

→ **It measures the proportion of examples for which the predicted label matches the single target label.**

→ In our case, the top-1 accuracy = $2/5 = 0.4$.

Top-5 Accuracy

→ Top-5 accuracy means any of our model's top 5 highest probability answers match with the expected answer.

→ **It considers a classification correct if any of the five predictions matches the target label.**

→ In our case, the top-5 accuracy = $3/5 = 0.6$.