What is the difference between precision and recall?

In [machine learning](https://builtin.com/machine-learning), precision and recall are two of the most important metrics when determining a model’s [accuracy](https://builtin.com/product/accuracy-precision-product-management). Recall is a model’s ability to find all the relevant cases within a data set, while precision is its ability to identify only the relevant data points. Together, they play an important role in [imbalanced classification problems](https://developers.google.com/machine-learning/crash-course/overfitting/imbalanced-datasets), which involve data distributions that are skewed due to too many data points falling into a single class.

What is cross-validation, and why is it important in binary classification?

Cross validation is a technique used in machine learning to evaluate the performance of a model on unseen data. It involves dividing the available data into multiple folds or subsets, using one of these folds as a validation set, and training the model on the remaining folds. This process is repeated multiple times, each time using a different fold as the validation set. Finally, the results from each validation step are averaged to produce a more robust estimate of the model’s performance