

Classification Project

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Classification

Dataset Information

- 70,000 small images of digits handwritten. There are 70,000 images with 28×28 pixels, and each image has 784 columns or features.
- Each column or feature value represents the pixel's intensity, from 0 (white) to 255 (black).

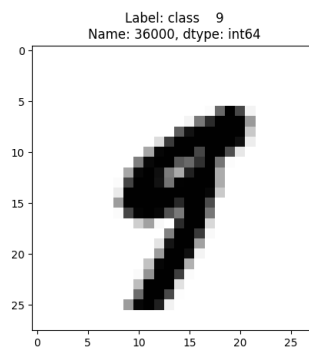
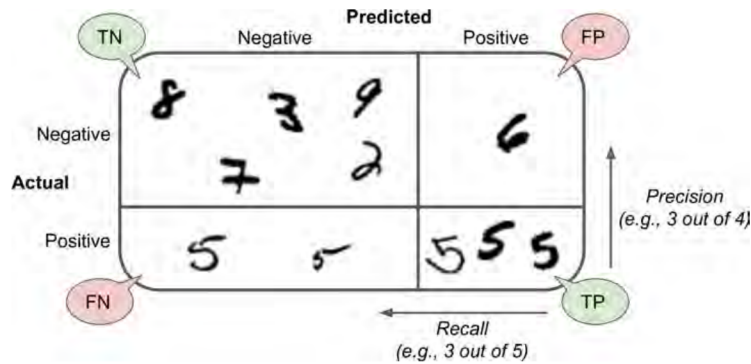


Figure 1: A digit from the dataset with its corresponding value from the label column.

Confusion Matrix



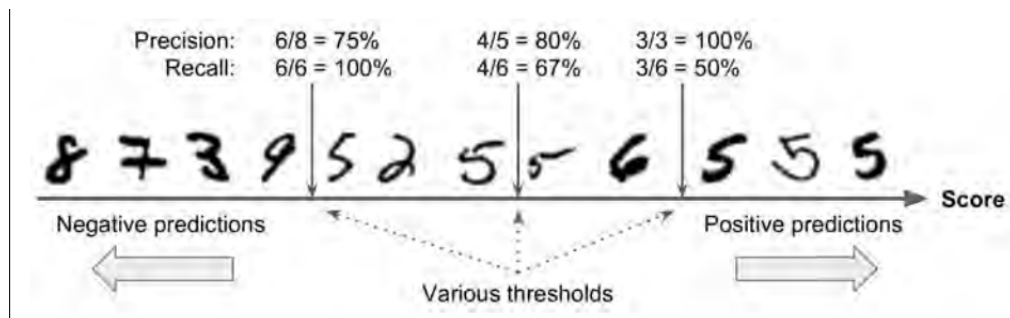
Precision

$$P = \frac{\text{True Positives}}{\text{True Positives} + \text{False Positives}}$$

Recall

$$R = \frac{\text{True Positives}}{\text{True Positives} + \text{False Negatives}}$$

Precision / Recall Tradeoff



Increasing the threshold will increase precision and reduce recall, and vice versa.