Question 1: What are the disadvantages of the 0–1 loss function?

Question 2: How does deep learning cut down some of the work that traditional machine learning requires?

Question 3: What is the goal of a loss function in face recognition?

Answer Question 1: The 0–1 loss function gives no consideration to the degree of the error. It only outputs 0 or 1, meaning that no matter the error, the corresponding loss values are always the same. In addition, it is not differentiable, limiting its use cases.

Answer Question 2: Unlike traditional machine learning, deep learning does not require a focus on feature engineering. Instead, features are extracted during the training of the neural network. Therefore, the work of designing feature extractors is reduced for deep learning.

Answer Question 3: The goal of a loss function in facial recognition is to allow for different images of the same person to be similar and for different images of different people to be dissimilar. In other words, loss functions are necessary to minimize the intra-class distance and maximize the inter-class distance of the samples.