

Instructions: Make sure your questions and answers are on different pages. Do not include your name or any other identifying information. I will know that information from Canvas.

Question 1: How is the ramp loss function an improvement of the hinge loss function?

Question 2: When should you select the absolute loss function over square loss function when comparing traditional loss functions in regression?

Question 3: What two categories can the loss functions of face recognition be divided into?

Answer Question 1: Ramp loss functions improves on the hinge loss by limiting the maximum loss value, resolving part of the main issue with hinge loss function, which is the influence of large outliers.

Answer Question 2: When the training set contains outliers that have an impact on the learning model. That is, because square loss squares the error, and as the absolute value of the error gets larger, loss increases faster.

Answer Question 3: measure the difference between samples based on Euclidean space distance and samples based on angular space.