

Technical Essay Answers:

1. She comes to you asking about why this happened, and what she could do about it.
 - What is your best guess as to what happened ?
 - I think the - test set – is pretty 'old'.
 - What would you ask her to check to verify if your guess is true ?
 - I kindly ask her to check if the test set reflect the current state of users' preferences and movie reviews.
 - How can she fix this problem if your guess was right ?
 - I kindly ask her to - update - the Dataset including train, dev, test sets and test the model in dev and test sets and check the accuracy, then try to deploy the model again and compare the performance to see if the issue is solved.

2. He comes to you asking about a solution to the situation.
 - What's your best guess about what has happened ?
 - That's clearly an 'over-fitting'.
 - How did the generator loss decrease and was still generating the same outputs at the same time ?
 - Because the model is biased by the features it learned from the dataset, due to un-balanced samples, un-normalized features, vanishing learning rate, not using the appropriate log functions for numeric stability.
 - What would you edit about his training process or code to avoid what happened ?
 - I think first of all, make sure to normalize and apply some transforms to data and balance samples in the dataset. Then try to regularize using dropout, batch normalization, momentum, clipping gradient, initialize weights with (xavier or kaiming) to lower the risk of over-fitting.