925 / 1000 **TA / Instructor Grading Total**

75 / 100 **Problem 1**

☑ -25 (a) high cosine / low Euclid example incorrect

100 / 100 **Problem 2**

☑ 0 Full Credit

200 / 200 **Problem 3** ***(Graded by: Ma)***

☑ 0 Full Credit

200 / 200 **Problem 4** ***(Graded by: Ma)***

☑ 0 Full Credit

350 / 400 **Problem 5** ***(Graded by: Ma)***

☑ -50 (d) Partial credit

Overall note from Richie:
P1a: Your first example has higher cosine and Euclidean similarity than your second example

Grade inquiries closed on **05/03/2021 @ 11:59 PM EDT**

Warning: Frivolous grade inquiries may lead to grade deductions or lost late days
It is currently after grade inquiry deadline. No new grade inquiries can be made.

Grade Inquiry: ✔ ***Grade Inquiry Has Been Resolved***

Hi, I am wondering why Problem 5d is incorrect? I think in theory the worst case is these two methods runs the same but most of the time branch and bound should always be able to exclude points so the number of test points shouldn't be an issue. Thank you!

Michael 04/28/2021 @ 06:22 PM EDT

Hi Michael,

I will send you the detailed explanation of P5(d) after the new deadline for it (tomorrow midnight). Will keep this in mind.

Best,
Rufeng

Rufeng 04/28/2021 @ 08:49 PM EDT

Hi Rufeng,

Thanks for the quick response! As it Q5 allows update, I would like to give a new version of 5d. I have also sent an email with the same update as listed below.

From result of a) and b), I would prefer branch and bound since in both cases B&B shows better performance than brute force. In theory, there is an extra step for branch and bound: partition. If the data set is small, partition may lower the performance comparing with brute force; if the dataset is large and randomly distributed, it is hard to tell whether the partition will improve or worsen the performance. However, if the dataset is separated and well clustered, then branch and bound will always be better than brute force no matter the size of the data. On the other hand, if the data is clustered but their centers are close, branch and bound performance may be degraded to brute force or worse.

Thanks for your time and consideration.

Michael 04/28/2021 @ 09:31 PM EDT

P5 (d) grade has been updated.

Rufeng 04/28/2021 @ 09:34 PM EDT