

PGT Exam Performance Feedback

2017/2018 Semester 2

COMP61342 Computer Vision

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Comments Question 1
Very well answered by the majority of the students.

Question 2:

Many people attempted this question. There were some good answers, but people lost marks for failing to provide enough detail, either by words, equations or diagrams. Indeed, the reluctance to sketch diagrams was quite noticeable. In Part a), many people got the basics of alignment, but failed to provide exact details of the algorithm, such as what exactly was being optimised during the alignment process. In Part b), many people gave good answers as to how to build the SSM, with missing steps being the main reason for lost marks. In part c), very few people attempted to describe the AAM. And of those describing the ASM, people lost marks if they failed to discuss profile models, or at least how using edges alone might give problems during search. Some people do seem to have used some alternative revision information other than that provided in lectures, which gave only a very short summary of the algorithms, with insufficient details. Despite being warned about this in the revision session.

Question 3

3.(a) Generally, this question was well answered since it tests standard knowledge and (as expected) some students achieved full marks. However, some students failed to explain how to combine an LoG with the Harris corner detector to find scale invariant corner features. Here a definition (and/or drawing) of the scale-space and how you search in the scale-space was expected. Finally, Harris corner detector is not a scale invariant method therefore it was not sufficient as an answer to this question.

3.(b) Generally well answered but some students did not provide sufficient details to achieve full marks. A diagram/drawing would have been helpful in this case.

3.(c) This question was meant to check more in-depth knowledge and understanding. A number of students got full marks here however the majority failed to notice that although in the SIFT feature description that was presented in the lectures, the dimensionality of the vector space was 128, it does not always have to be so. For example, instead of having 8 bins for the histogram of gradient directions, you could choose a different number of bins for the histogram. This will change the dimensionality of the feature vector. So, in conclusion, the dimensionality parameter of the feature vector determines the distinctiveness of the feature.

Question 4

4.(a) and 4(b) Good

4.(c) Good with some students gaining full marks. Some students did not explain HOW one can find corresponding points in the images.

Question 5

Too few people answered this question for any useful comments to be made.
