Reponse to Editor:

Comment: Thank you for your patience during the review process and for making significant revisions to your manuscript, which I am pleased to accept now. Before you upload the final version, please address some minor changes suggested by a reviewer.

Response: We thank the editor for this process and acceptation of our manuscript. Below is the response to the last reviewer comments, and the updated files have been uploaded.

Response to Reviewer 2:

Comment: The article improved substantially. The programme was split into two applications. The first is for image segmentation, and the second is for object detection. The project was accompanied by promotional and instructional videos to help people engage with it. Example files in an organised folder structure enable quick orientation through numerous files and code.

Response: We thank the reviewer for this new review of our updated manuscript. Below are our responses to comments.

Comment: This time, I tried the camera module V2 with an RPi 4, but it simply wasn't possible, maybe because of its built-in lens. I saw just a very small light circle in the dark, so I would remove it from sentence 75.

Response: We have updated this sentence. Indeed, the built-in lens has to be removed has the sensor has to be exposed. If used with our 3d printable camera sensor adaptor, a 16mm round cover glass slip can be used has a dust protective glass to protect the exposed sensor. If the built-in lens is left on the sensor, it makes it not compatible with a microscope expecting an exposed sensor. Unscrewing the built-in lens of a v2 and v3 is not easy as it is slightly glued in place. This is why we recommend using an HQ camera (comes with an exposed and calibrated sensor for microscopy), or AI camera (comes with a tool to unscrew the sensor, but still need re-calibration of the colour).

Comment: You could add the sensor size to Table 1 and some information, with which you warn potential users that your recommended sensor has a small size 1/2.3", and it takes a very small section of view. So, the object appears larger in the photo than it would in a DSLR photo. So, readers might count with other objectives or projective decreasing the size 0.5x.

Response: Tables 1 was edited to add this information for each sensor. We also emended the text to recommend the use of a 0.5x or 0.63x reduction lens adaptor.

Comment: I was searching for an RPi-compatible camera module with a larger sensor to keep the magnification aligned with the microscope's original design, but either it has a built-in lens, or there's a compatibility issue (Arduino-based camera). Would you have any recommendations?

Response: We also tried to look for an alternative solution, which does not seem to currently exist without potential compatibility issues (Arduino sensor). However, we are very pleased with the result obtained with the HQ camera sensor, and really recommend this one.

Comment: I would request a function to store photos also in a different format without compression. This will help you to promote the RaCAM as a professional tool for image analysis.

Response: We have added to possibility to save the images in PNG. This has been uploaded to the github link to download and supplementary data.