**Modifications that are done:**

**Structure: 8 (out of 16 points)**

**-4: There are many grammatical mistakes.**

-> Fixed: used Grammarly to check grammatical errors in the document.

**-4: the structure and presentation need improvement. The description of the method could be improved with a diagram of flowchart. In the second set of figures, the ground-truth and the result are mistakenly named multiple times (red must be the GT and white the result). You can rearrange the results in a table to make it easier to read and compare. You could improve the layout of the report by resizing and rearranging the images.**

-> Fixed: Added a flowchart in the Methodology section to get a better understanding of the method.

->Rearranged the images to correctly show Ground Truths and the result images.

**Critical Perspective: 6 (out of 24 points)**

**-10: The proposed method is trivial. Canny edge detector and hough transform generate line features, which could be used to extract roads. Also, technical details, e.g., ""adjust each block separately"", are not discussed.**

-> Explanation: Canny Edge detector and Hough Transform could generate line features and extract roads. In our case, the image still contains noise, even though we use noise filters. As a consequence, these noise could impact the effect of these two methods above. We observed that Hough Transform detects unwanted lines because of noise.

-> Fixed: For example, we have 16 subimages for one original image, and we have to adjust the parameters such as Number of Lines, Fill Gap, and Minimum Length of the houghline function one by one. The reason why we do that is because we want to obtain as many lines as possible. (Added in the Discussion section)

**-8: Lack of analysis of the experiment results to reveal the insights of the method performance. Discussing a few cases helps, but it is unclear what are the advantages and disadvantages of the method. Also, how does this 4\*4 divisions help the method? in almost all cases the number of false positives has increased dramatically, leading the precision to values less than 1%. Please provide discussion on this aspect.**

-> Gave more explanation and used examples in the discussion for better understanding. Also, added some results in the experimental results for proving that 4\*4 image division is the better version.

**Content: 22 (out of 32 points)**

**-6: Why precision and recall provided for only the second set of predictions? The first set of predictions only has accuracy, which does not give much information about the performance of the model in correctly detection the road pixels. Moreover, this way it is not possible to assess the improvement of model with the 4\*4 split over the initial model.**

->The initial model was not the generalized model and that is the reason we eliminated that model. The reason we haven’t given recall and precision for the 1st set of results is that we haven’t calculated those fields for them as we already know the model is not correct. All the details are mentioned in the report

**-2: lack of a description of how the groundtruth is prepared.**

-> Fixed: For the ground truth dataset, we manually generate for each image by using an online application called kleki.com. We have nine ground truth images corresponding to its original image. The size of each ground truth is 2048\*2048 and .jpg format.

**-2: lack of a description of the data sets**

-> Fixed: In this project, we use two image datasets: original images and ground truth. For the original images, we have nine satellite images that contain crops, fields, and roads. The size of each image is 2048\*2048 and .jpg format.

For the ground truth dataset, we manually generate for each image by using an online application called kleki.com. We have nine ground truth images corresponding to its original image. The size of each ground truth is 2048\*2048 and .jpg format.

**References: 4 (out of 8 points)**

**-4: References are not numbered. Moreover, the references are not correctly cited inside the text ( there is only one article cited but more references are mentioned at the end.)"**

-> Fixed: references in chronological order (the same order as they appear in the text). A number is added in square brackets inside in text, which could be found in the Introduction section

**Implementation:**

**"Functions alignment with the described functionalities and experiments in the report: 24 (out of 24 points)**

**Successful compile: 5 (out of 5 points)**

**run: 5 (out of 5 points )**

**Data/GT: 10 (out of 10 points)**

**Code readability:**

**meaningful names for variables: 0 ( out of 2 points ) the name of variables can be better.**

-> Fixed: rename the variables which correspond to the methods used to create that variable.

For example: “removesmallobjects.png” created by using bwareaopen() renamed to “bwimage.png” (please check Implementation.mlx file)

**program structure: 2 (out of 2 points)**

**comments: 1 (out of 2 points) there are many parts without any comments."**

-> Fixed: comment out in order to divide the program into sections and subsections.

For example: how to apply noise filters, how to split the image into 4x4, etc., which can be found in the Implementation.mlx file, which is the main file