----------------------- REVIEW 1 ---------------------  
SUBMISSION: 6325  
TITLE: Impact of Blinking on Deep Learning based Iris Recognition  
AUTHORS: Daniel Tebor, Eli Headley and Mahmut Karakaya  
  
----------- Overall evaluation -----------  
The study generates synthetic occlusion images to simulate blinking effects. How well do these synthetic images represent real-world scenarios, especially considering the dynamic and variable nature of actual blinking?

We have added couple sentences to Section 2.1 paragraph three that clarify that our synthetic blinking is intended to roughly simulate actual blinking.

The paper discusses training models with varying degrees of occlusion. Could you elaborate on the decision-making process behind the chosen occlusion levels and how they impact the model's ability to generalize to unseen occlusions?

We have included additional information in the second paragraph five of Section 2.2 on how we decided on a step size of 10% blinking.  
  
The study utilizes ROC curves and Euclidean distance histograms for evaluation. How were these metrics chosen, and do they fully capture the model's performance in terms of both accuracy and robustness against different types of occlusion?

Section 3 paragraph one now includes our reasoning about why we chose ROC and Euclidean distance histograms for evaluation. As for the second part of the question, our paper is explicitly about the effects of blinking and we do not investigate other types of occlusion such as glasses, other articles of clothing, etc. Such research should be the topic of further study.

How does the proposed model's performance compare to existing methods, particularly those that might use different approaches to handle occlusion caused by blinking or other factors?  
  
Our paper is predicated on the fact that there is very little research we could find that investigates the effects of occlusion on iris biometric systems, particularly in the context of neural networks. For that reason, we don’t have other results that we know of that we can directly compare our results to. Furthermore, our research aims to isolate blinking as a factor in model performance. For this reason, potential methods to improve performance, such as using off-angle images and or varied pupil dilation during training, were not utilized.

----------------------- REVIEW 2 ---------------------  
SUBMISSION: 6325  
TITLE: Impact of Blinking on Deep Learning based Iris Recognition  
AUTHORS: Daniel Tebor, Eli Headley and Mahmut Karakaya  
  
----------- Overall evaluation -----------  
Paper Synopsis:  
The paper is about iris classification using convolutional neural networks.  In this direction the authors use a dataset based on two cameras that allows images of the iris from different angles.  Moreover, and this is where the real novelty is for the paper, the authors augment the dataset with varying degrees of occlusion of the iris due to eye blinking.  The authors perform experiments on ResNet50 and showcase that augmenting the dataset with varying degrees of occlusion of the iris does improve the predictive mechanism.  
  
Evaluation Justification:  
The authors motivate the problem well, cite related work, and perform good experiments with reasonable baselines.  The results validate the idea of the authors that occluded pictures of irises when added to the training set can indeed improve further the predictive accuracy of the CNN that is used for classification.  
  
- There are some typos in the paper here and there.

We have cleaned up the paper for final submission.  
  
- In Figure 4, we can see two different levels of green and one blue, but the legend at the top left only has light green and blue and even then, there is no explanation as to what is what.  Please add some text and add the missing green color.

Additional context has been added to paragraph two of Section 2.2 to explain the histogram present in Figure 4.

- In Table 1, perhaps add a total count at the bottom of the table that shows the total amount of examples that come from every camera.

We do not believe doing this makes sense. Table 1 shows the image count for each cohort, including the original dataset in row one. This number corresponds with the number of images captured by the orbital and frontal camera. The rest of the images are synthetically generated as highlighted in Section 2.2.  
  
- I would also like to see in the conclusions section a clear distinction between the takeaways for closed-world and open-world experiments.

We have elaborated on our Euclidean histogram results and added some content to Section 4 on how those results reflect the potential performance in an open-world scenario.

- In the final version the authors can explain where they found the original dataset (include some link perhaps?).

We felt there was no information that needed to be added. As mentioned in Section 2.2 on the first line, “There is no publicly available iris dataset that includes images at different blink levels…” The original dataset is not publicly available and is proprietary. Furthermore, we elaborated on how we adapted our existing dataset for the occlusion experiments extensively in the rest of the section.

- Also, since the authors have space, perhaps they can perhaps spend 1-2 columns of text and introduce some preliminaries so that the paper is more self-contained, in the sense that they can give a brief description of how an artificial neural network works and how convolutions work.

After the rest of the improvements we have made, we do not have space for this correction. Furthermore, we do not believe it is particularly pertinent as we have cited the paper in which ResNet50 was introduced, which goes in-depth on the topic.   
  
  
----------------------- REVIEW 3 ---------------------  
SUBMISSION: 6325  
TITLE: Impact of Blinking on Deep Learning based Iris Recognition  
AUTHORS: Daniel Tebor, Eli Headley and Mahmut Karakaya  
  
----------- Overall evaluation -----------  
blinking issues are well addressed.

ResNet50 model with transer learning should be explored more.

We have added some more context for what transfer learning is in the third paragraph of Section 2.1.

The blinking iris data collection mechanism should be indicated.

We are not sure exactly what this is referring to. If it refers to our ability to collect how much of the total area of the iris is visible, we explain how this is done in Section 2.2, paragraph four. If it refers to how we validated the model, we have added further elaboration in section 2.3 paragraph two about the validation dataset that was fed into the model to generate results.

In2.3 Implementation of Deep learning model should be highlighted.

Section 2.1 already explains that we utilized ResNet50 with pretrained weights using the PyTorch and Torchvision Python libraries. Additionally, we highlighted how images were preprocessed for ResNet50 at the end of Section 2.2. Finally, the third paragraph in Section 2.3 already details the optimizer, criterion and various other parameters used for training the ResNet50 model. Overall, we believe that the implementation is already clear.