Dear Editors:

The following is the voice content of the video.
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Dear Editors:

We cherish this demonstration opportunity very much, and will fully demonstrate our research results, including dataset production, network improvement and PPT presentation.
In this paper we propose a lightweight YOLO-SF fire segmentation model.
Using Labelme software, 3203 firework pictures and 1797 non-firework pictures are labeled. These are JSON the files and these are the TXT files.
All experiments are carried out on Baidu's AutoDL server.
It can be seen that this training has been completed and the training results are saved.
All codes and datasets have been uploaded to the IEEE website and the Github.
Improvements based on the YOLOv7-Tiny network.
we have conducted more than one hundred improvement experiments.
There are fifty-eight files.
These are some modified py files, yaml files, and this is the yolo.py file.
Experiments are conducted on four versions of the YOLOv5 and YOLOv8 segmentation network.
These the results are the YOLOv8. And the results are the YOLOv5.
Experiments are also conducted for Mask-RCNN. This is the Mask-RCNN. These are the experimental results.
This is the MobileViTv2 structure.
The details of the improvement of the backbone network are shown here.
It can be seen that the F1 value and mAP value of the MobileViTv2 module is the best.
Here shows the working process of CBAM and the details of the combination with the neck network.
It can be seen adding the CBAM attention mechanism, the training results of the network are significantly better than others.
It can be seen from the graph the recall value and mAP value of the Varifocal Loss are the best compared to the others.
The improved model converges faster than the original model with the increase of training times.
This is the structure of the YOLO-SF.
For the two indicators of Box and Mask, the F1, Precision, and Recall indicators of the improved model in this paper have been greatly improved.
With the addition of different improved modules, the training results of the model are gradually improved.
This paper receives financial support from two scientific and technological research projects in Henan Province.
This paper is completed by the above four people.
We refer to thirty-eight literatures.
Next, we show the process of using the YOLO-SF model to detect real fire scenes.
It can be seen that with the reading of fire video information, the detected fire information can be returned in real time.

This is the result of the Preflight.
Finally, we sincerely hope that this paper will be approved by all editors. We attach great importance to your valuable opinions, and will seriously consider and respond positively.
Thank you very much for Listening.
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Hope to reach the standard published in this journal as soon as possible. Thank you again for this opportunity.

Yours sincerely,
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