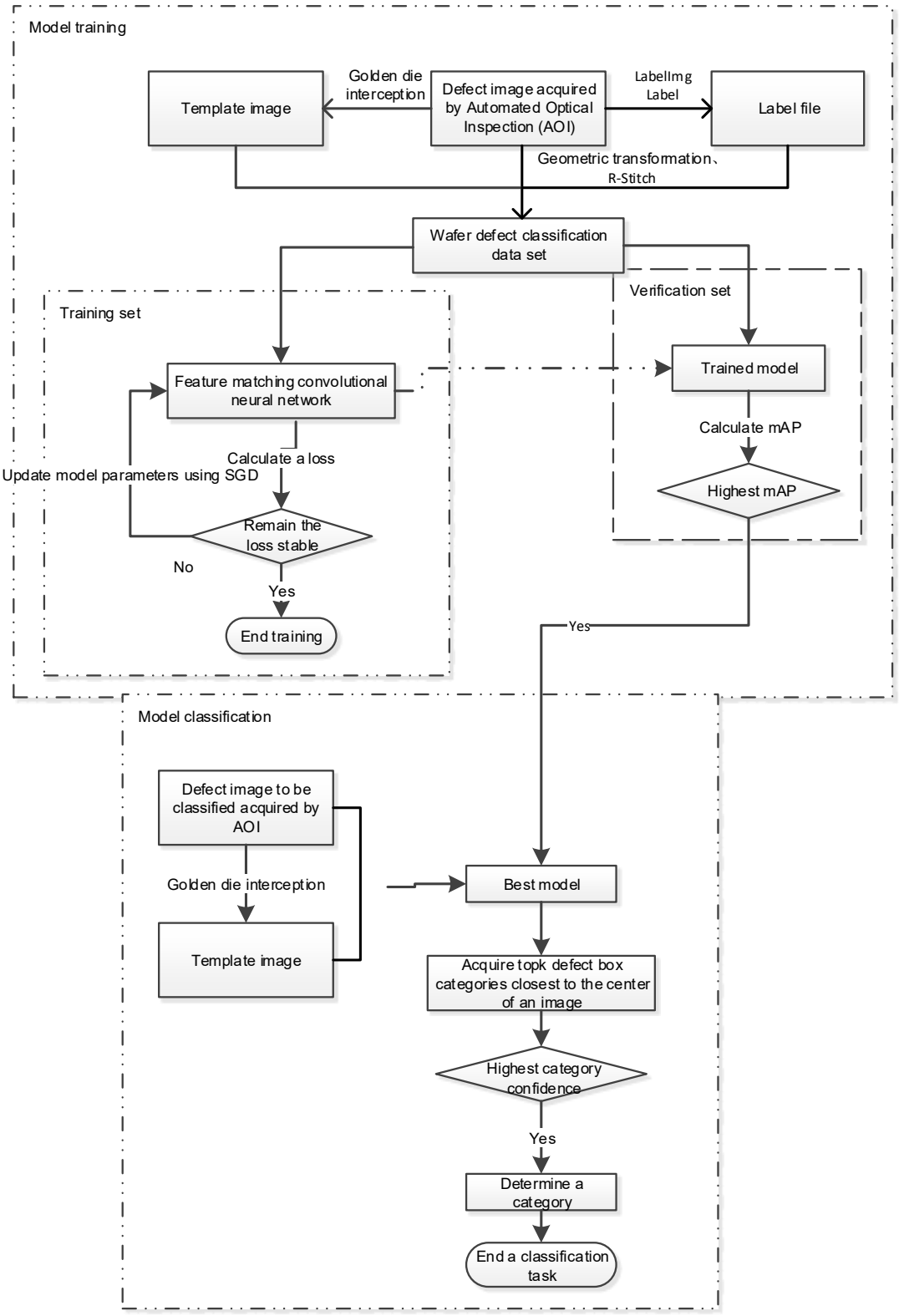
Fig. 11


Model training
Template image
Golden die interception
Defect image acquired by Automated Optical Inspection (AOI)
LabelImg Label
Label file
Geometric transformation、R-Stitch
Wafer defect classification data set
Training set
Verification set
Feature matching convolutional neural network
Trained model
Calculate a loss
Calculate mAP
Update model parameters using SGD
Highest mAP
Remain the loss stable
No
Yes
End training
Yes
Model classification
Defect image to be classified acquired by AOI
Golden die interception
Template image
Best model
Acquire topk defect box categories closest to the center of an image
Highest category confidence
Yes
Determine a category
End a classification task