Steel Segmentation

2023 Apr 12

Rundown

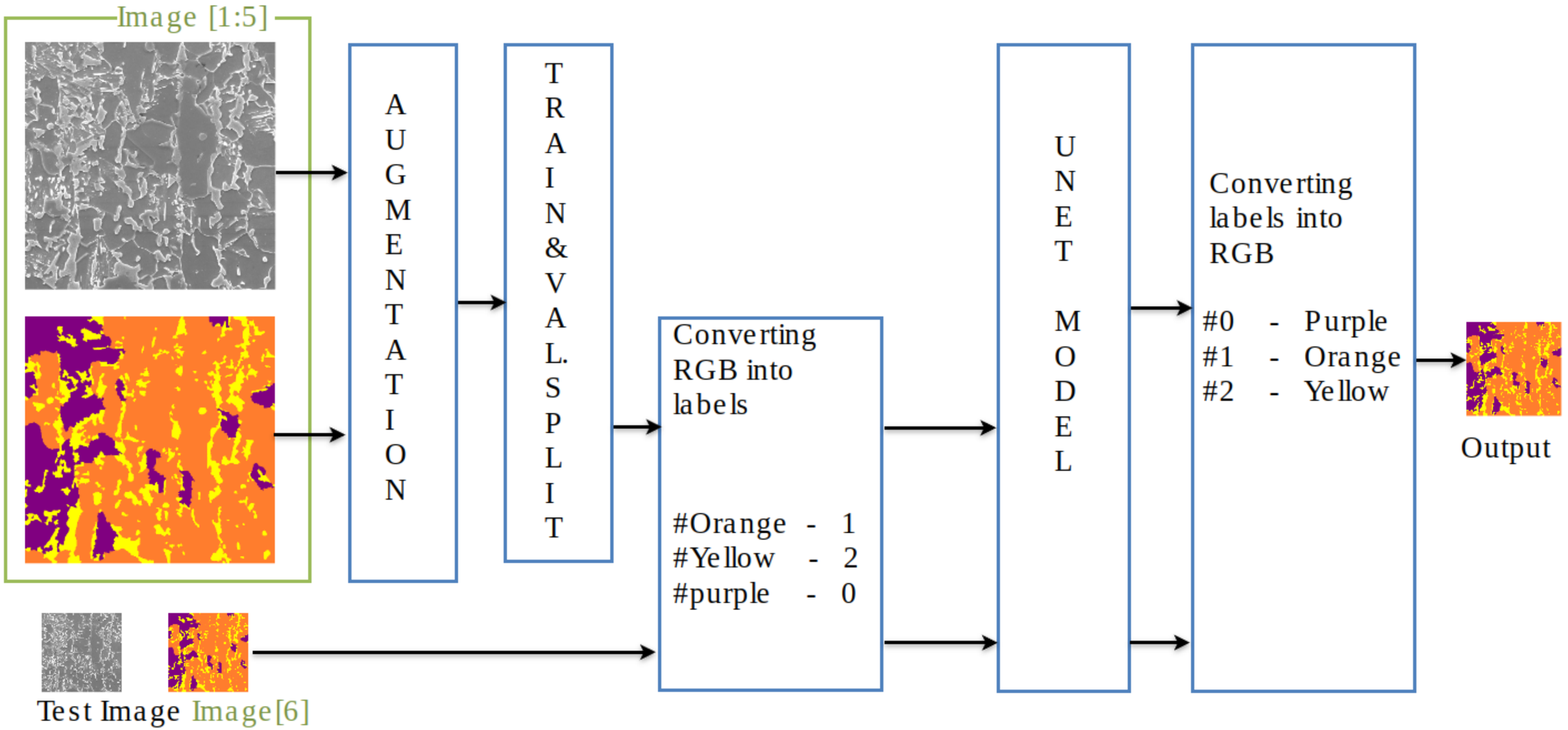
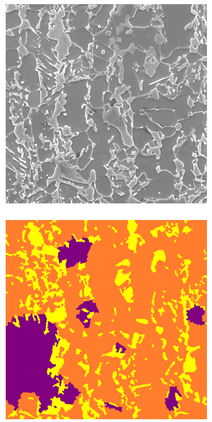


Image [1:5]
AUGMENTATION
TRAIN&VAL. SPLIT
Converting RGB into labels
#Orange - 1
#Yellow - 2
#purple - 0
UNET MODEL
Converting labels into RGB
#0 - Purple
#1 - Orange
#2 - Yellow
Output
Test Image
Image[6]

Model Outlook



Input Images

Convert to corresponding labels of {0, 1, 2}

reshape

- Set Model
- Set Optimizer
- Set Loss

Loop on Epoch

- Train
- Calculate Loss
- Optimize

Run Validation

If val_acc[i]> val_acc[i-1]

Save Model State

Calculate Metrics

Model	UNET
Optimizer	Adam
Loss	Focal (0.25)

Setup

- kernel size - 3
- Batch Size - 16
- Learning Rate - 0.00001
- Channel - 16
- Depth - 4

Metrics

Loss, Confusion Matrix, mIoU, Accuracy

Schedule

Training model and comparing results of different anti effects with ReLU activation function

There are 3 anti types - {down, up, down&up} - (15 hours each for training) **Apr 14**

Training Model with attention **Apr 15**

Training Model with 4-Class classification

I will be fixing code during the ReLU training and perform the experiment on Apr 17 **Apr 18**

Multi-Parts Presence paper - Complete Draft (Except Reference) **Apr 20**

Steel Segmentation with Transfer Learning **Apr 25**