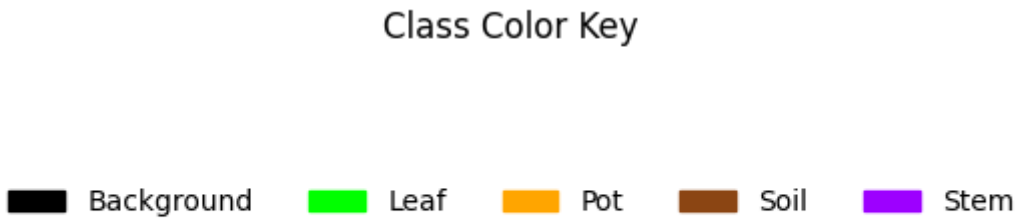
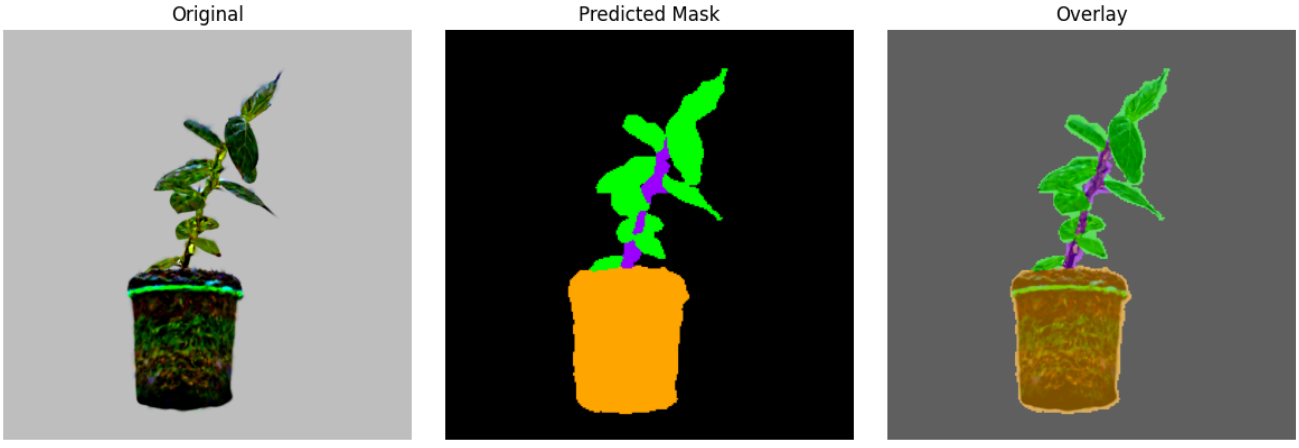
Results

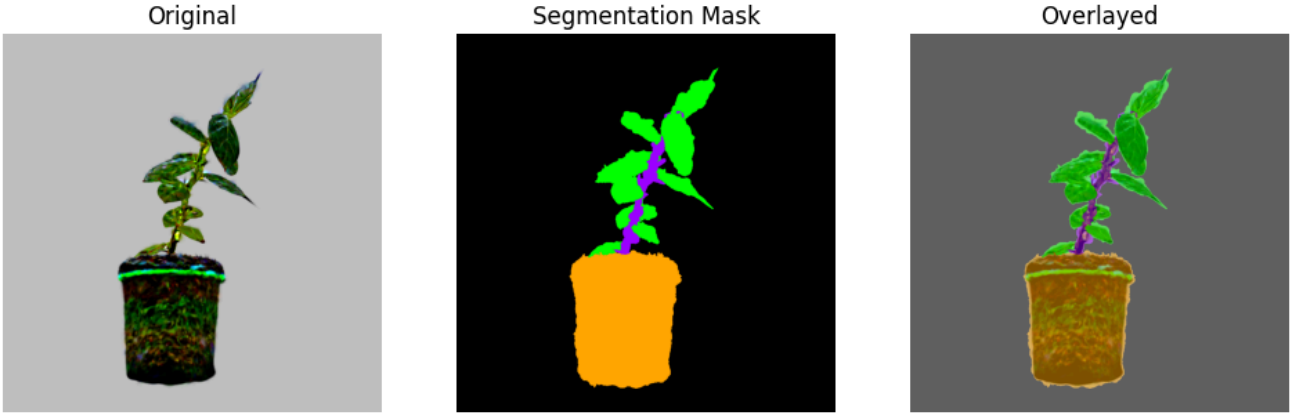
DeepLabV3Plus_Resnet151_Imagenet

```
0: (0, 0, 0),       # Background (black)
1: (0, 255, 0),     # Leaf (green)
2: (255, 165, 0),   # Pot (orange)
3: (139, 69, 19),   # Soil (brown)
4: (157, 0, 255),   # Stem (purple)
```



bean5/gt/1.png





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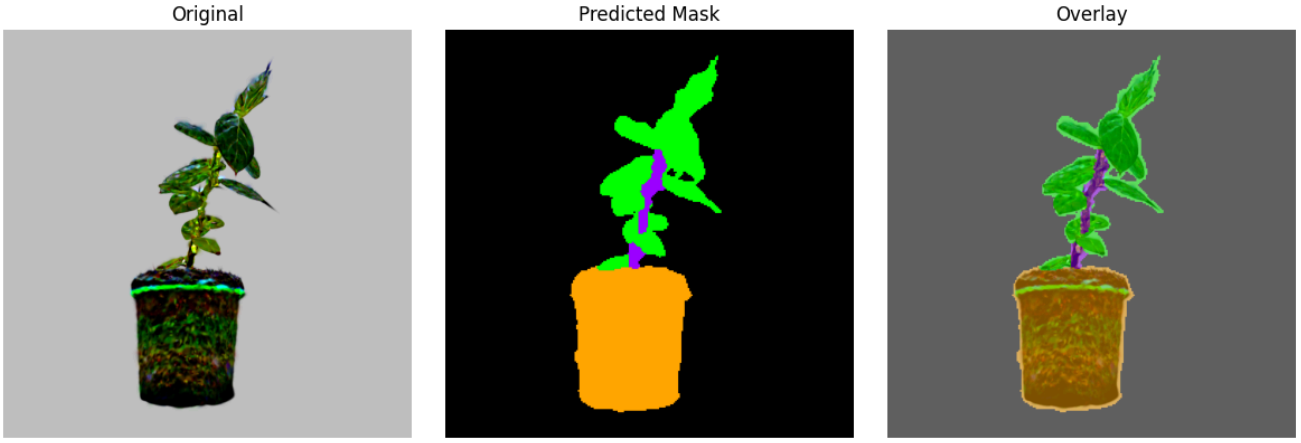

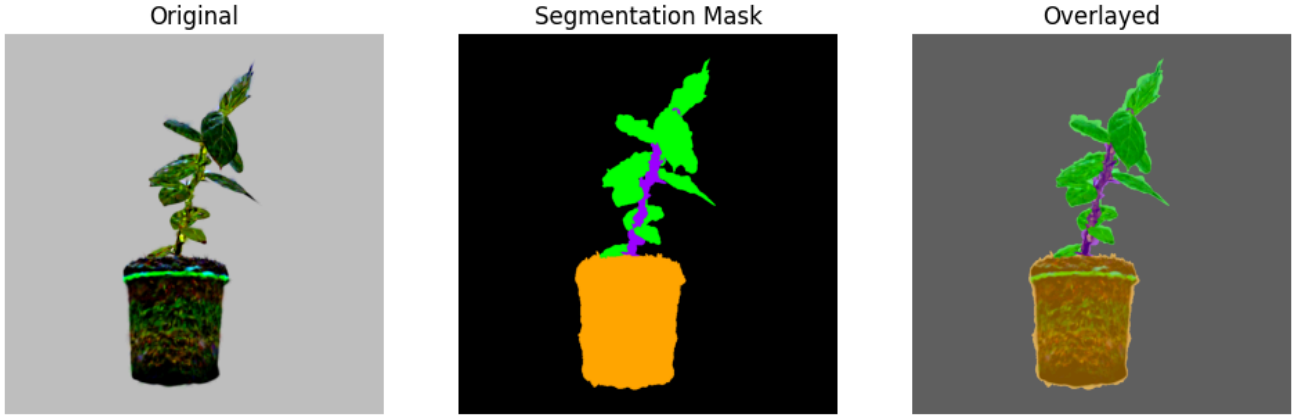

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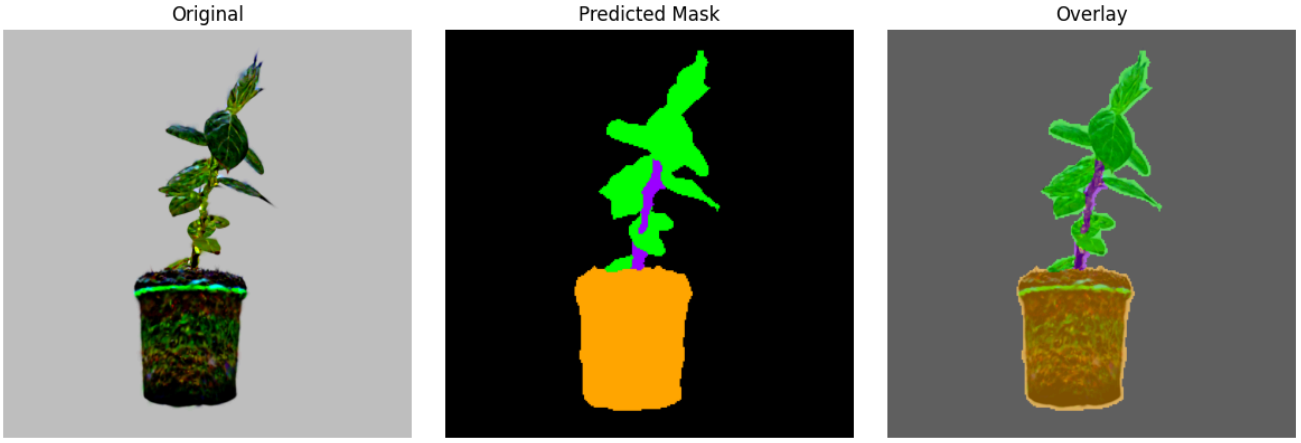

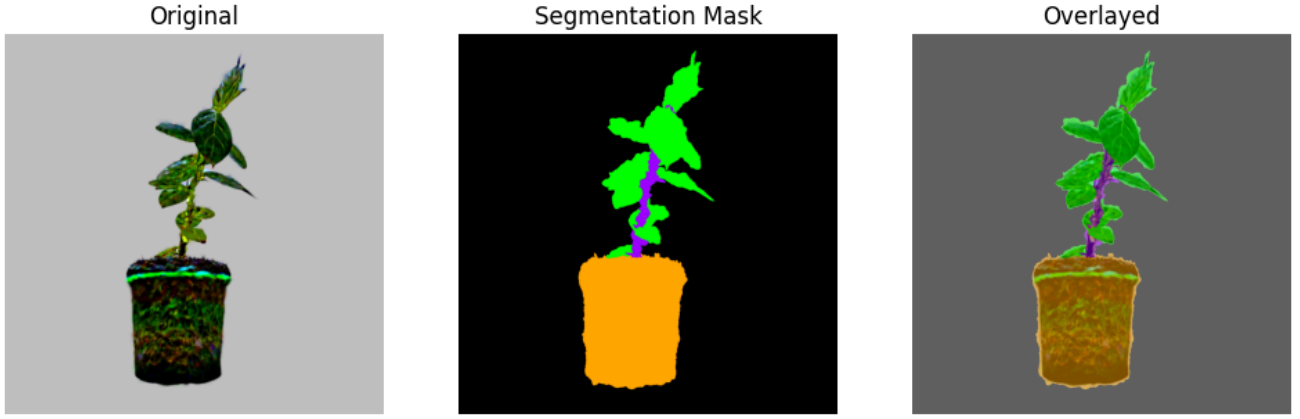

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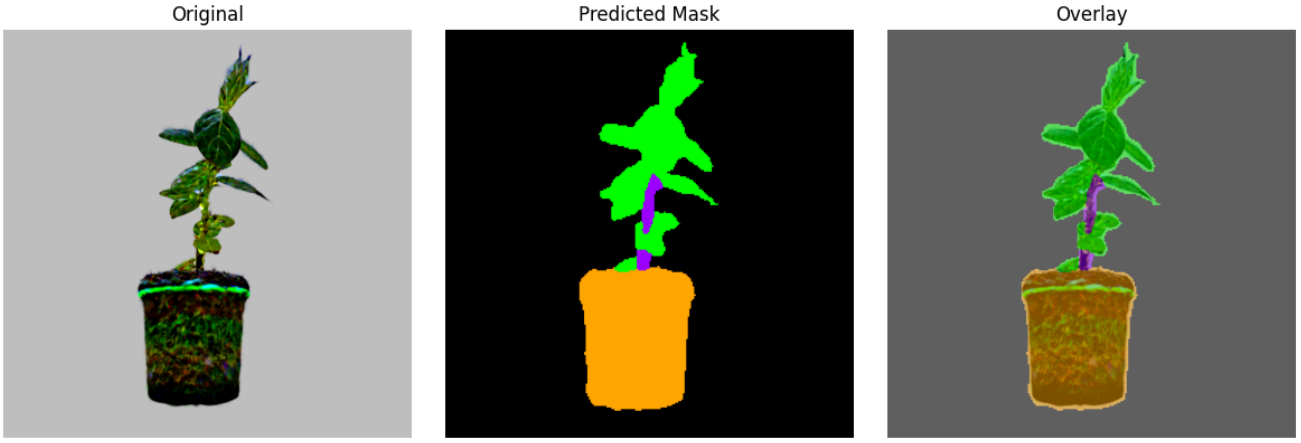

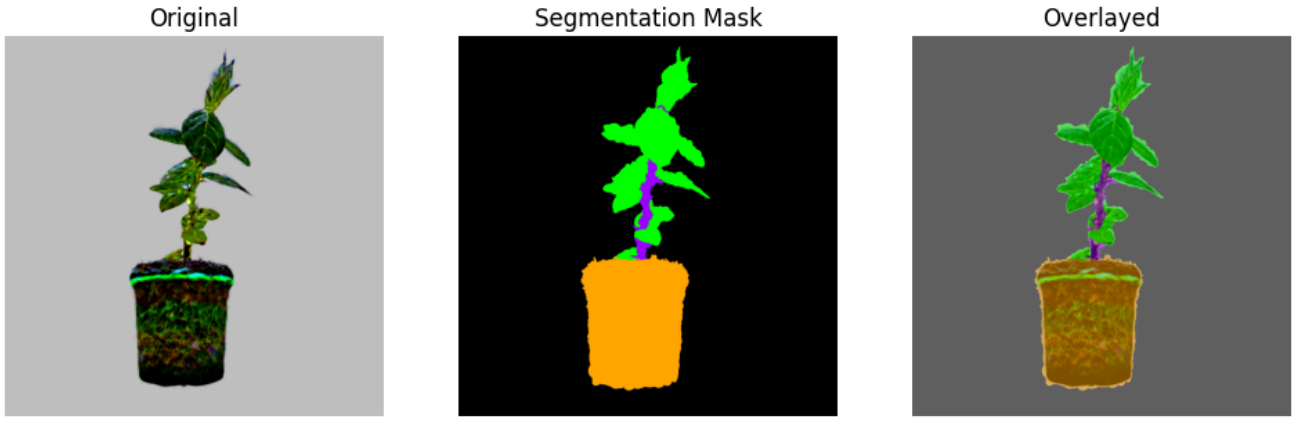

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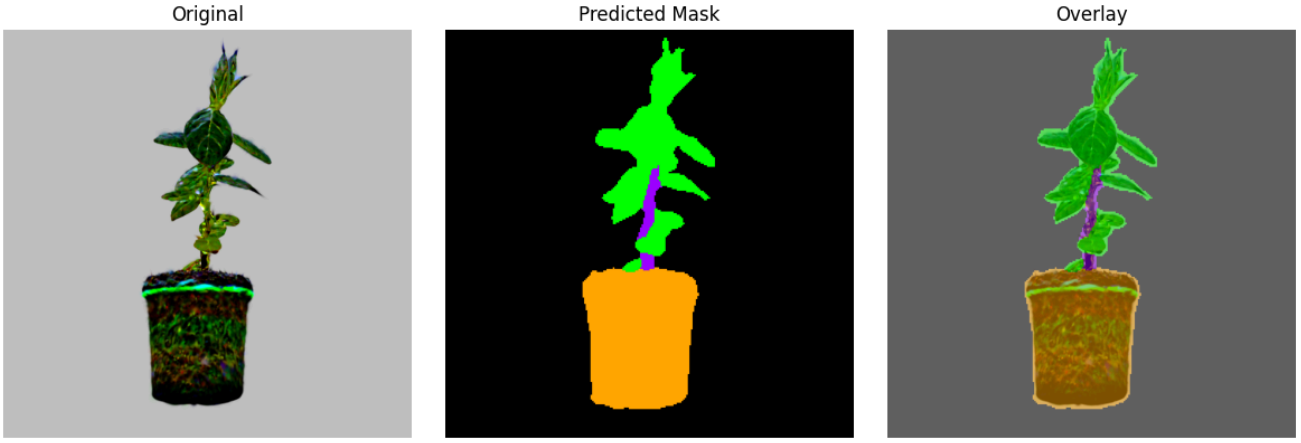

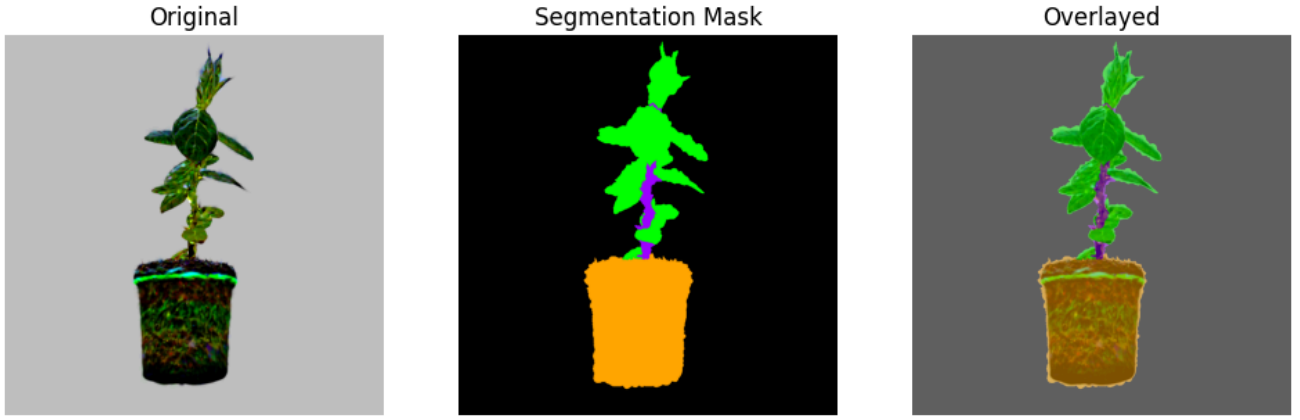

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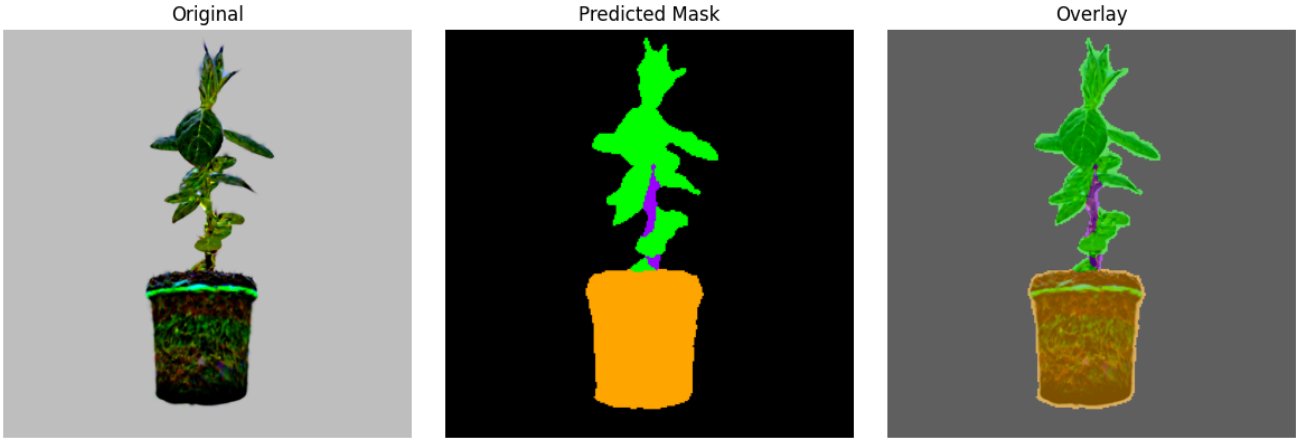

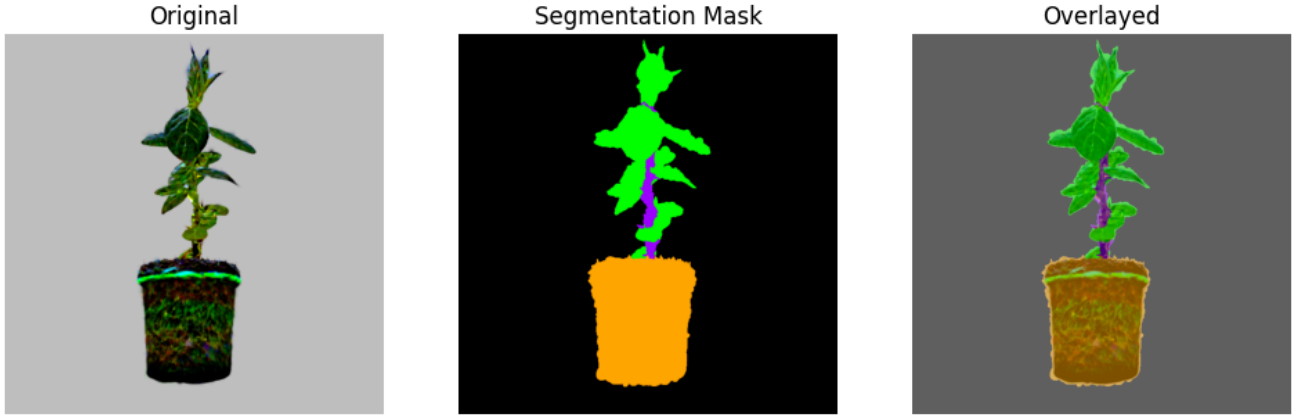

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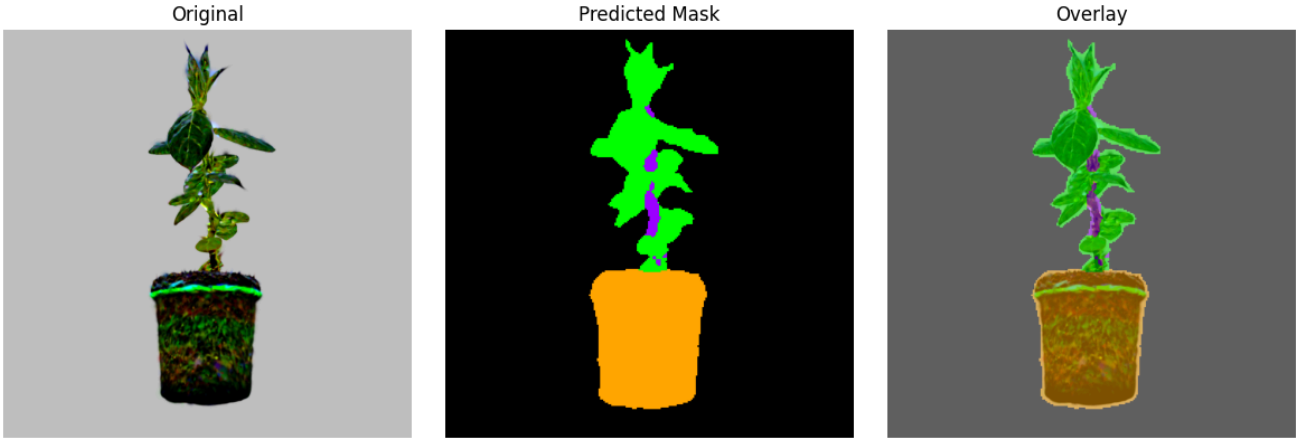

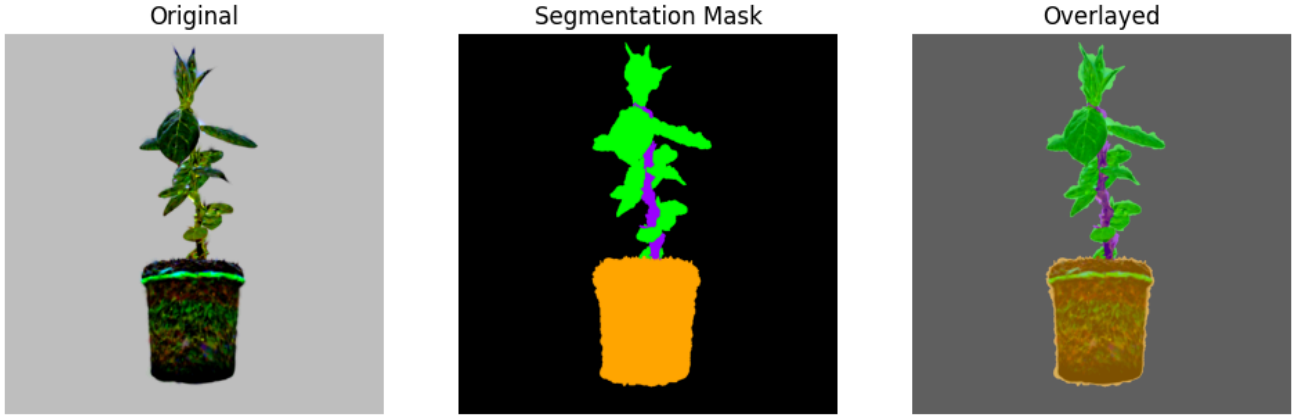

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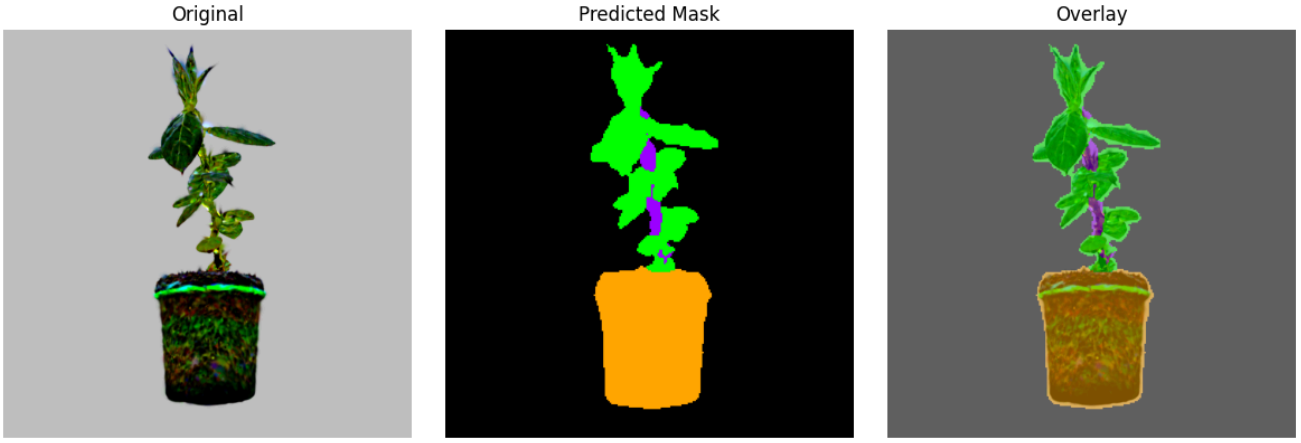

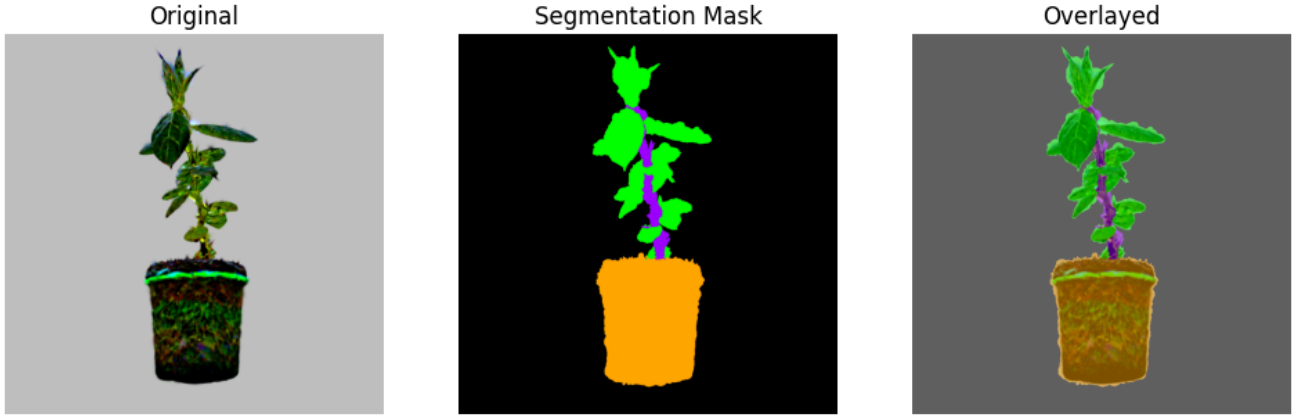

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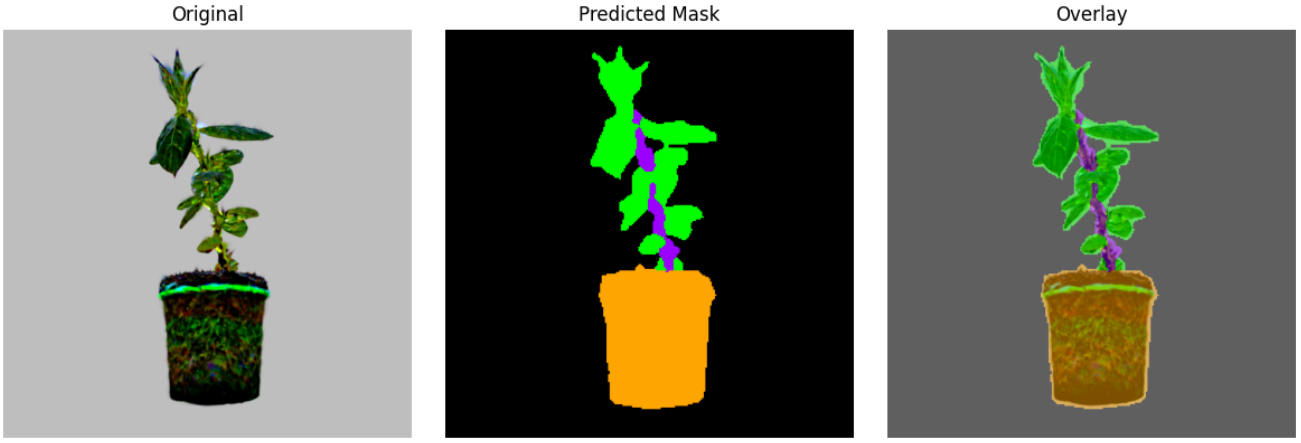

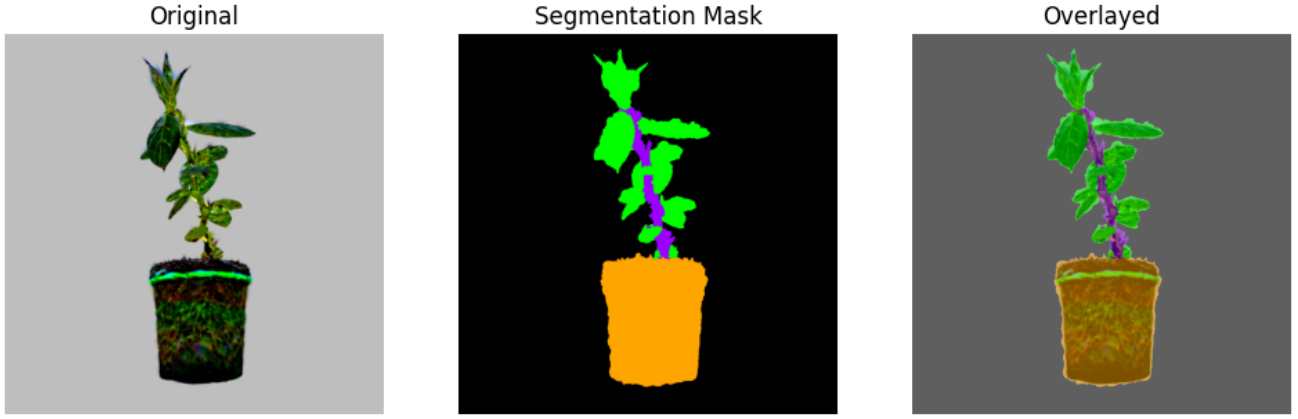

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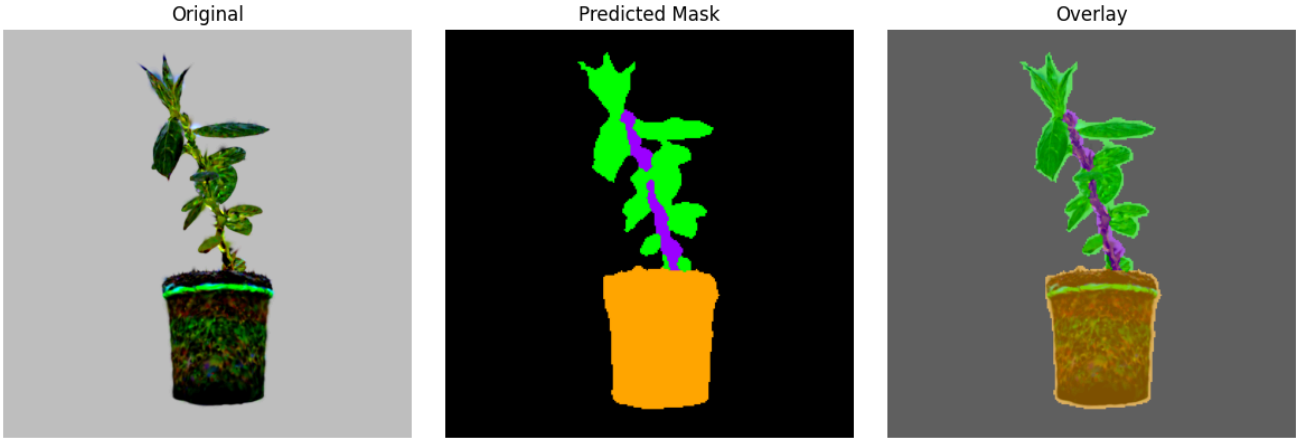
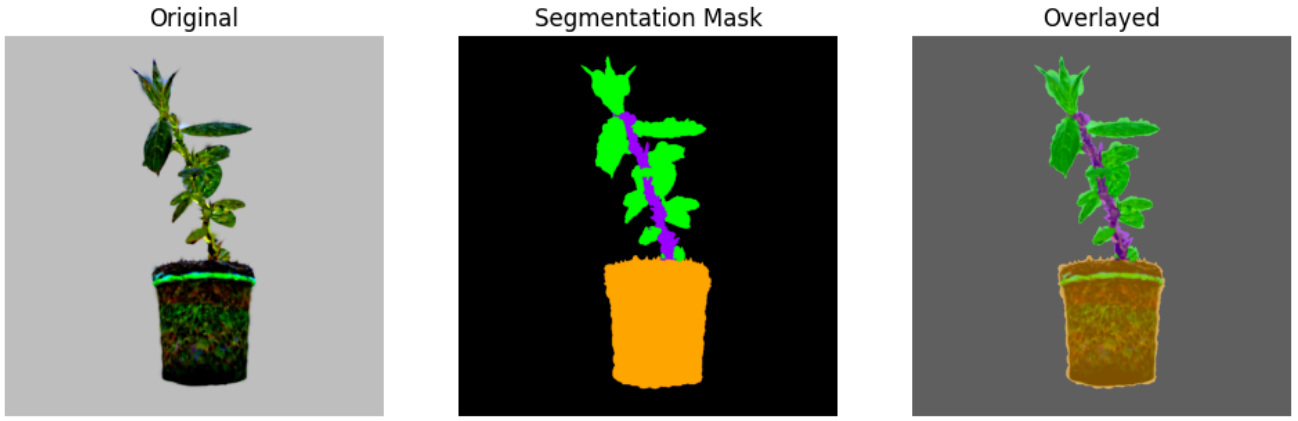
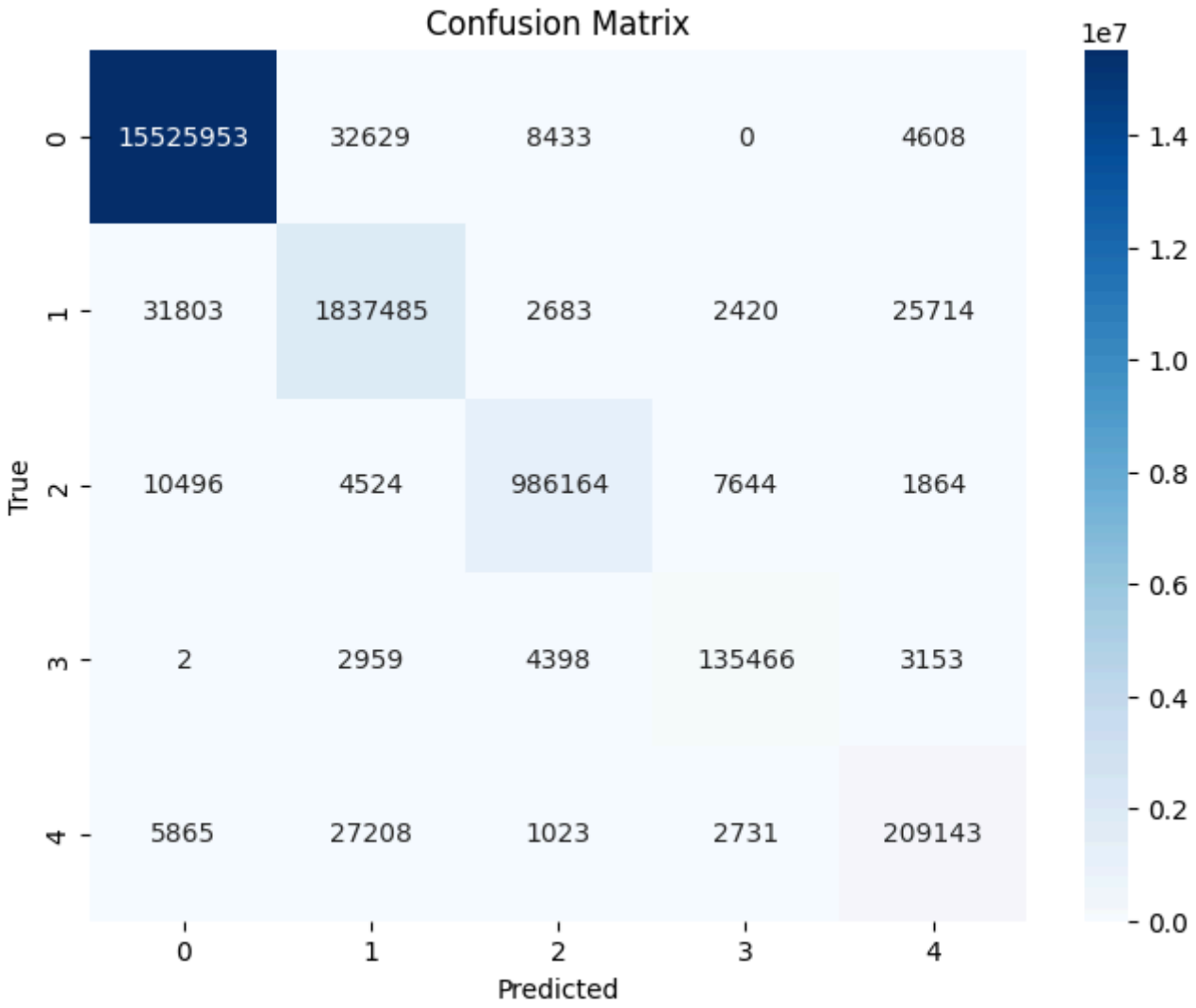




Evaluation Metrics:
Mean IoU : 0.8969
Mean F1 Score : 0.9432
Mean Accuracy : 0.9436

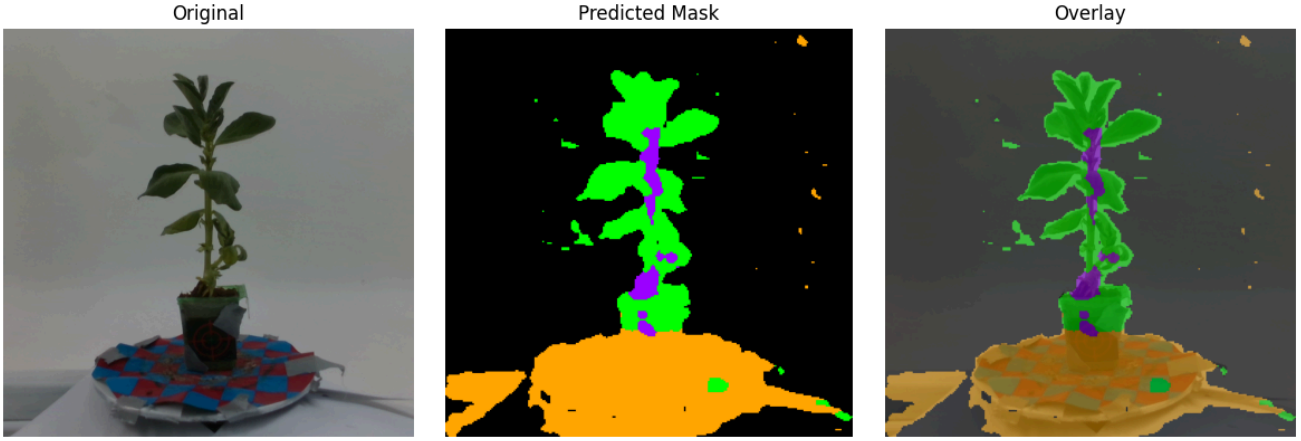

```
{'iou': 0.8969278931617737, 'f1': 0.9432175159454346, 'accuracy':
0.9436219930648804}
```


```
{0: 'Background', 1: 'Leaf', 2: 'Pot', 3: 'Soil', 4: 'Stem'}
```

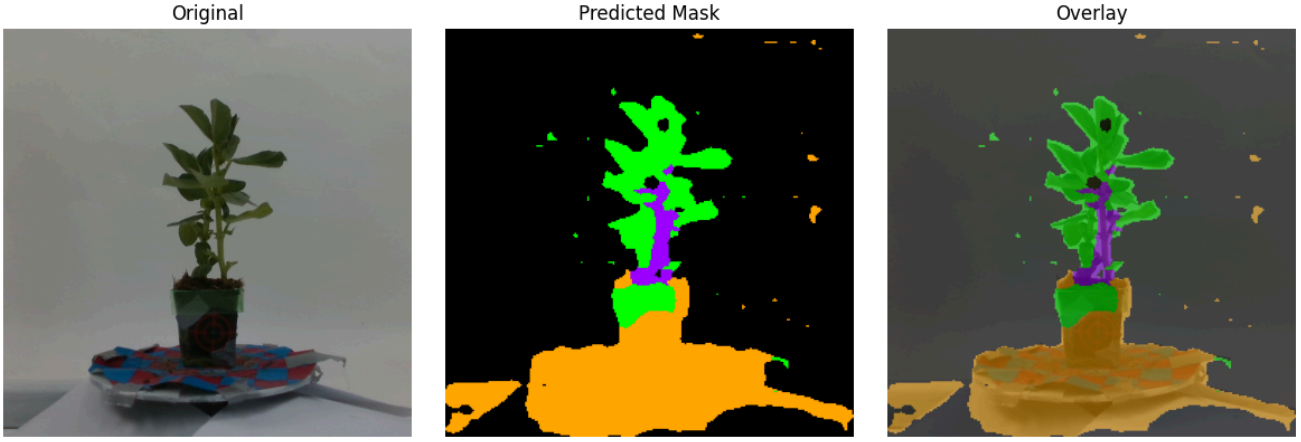


Real Data Inference

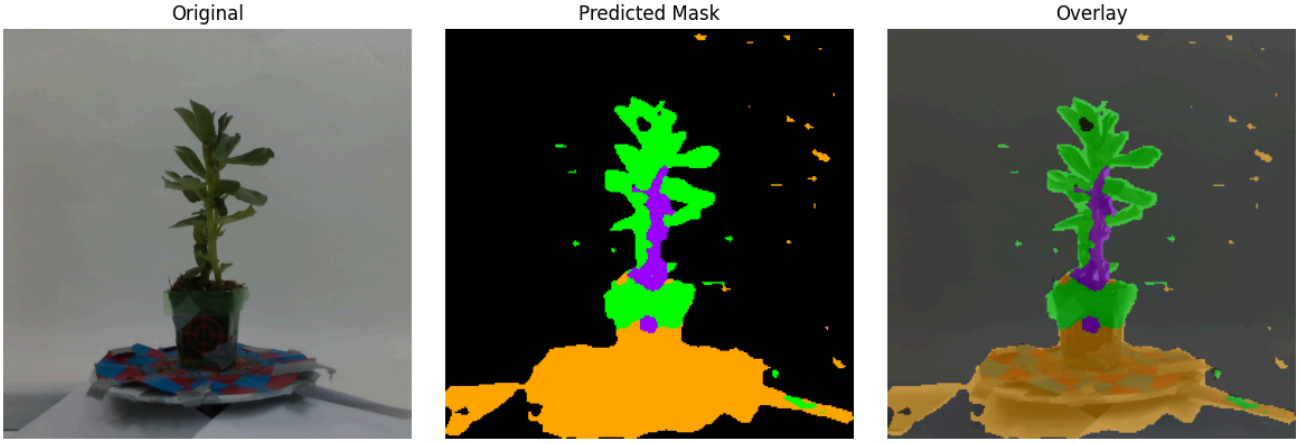
Original | Predicted Mask | Overlay



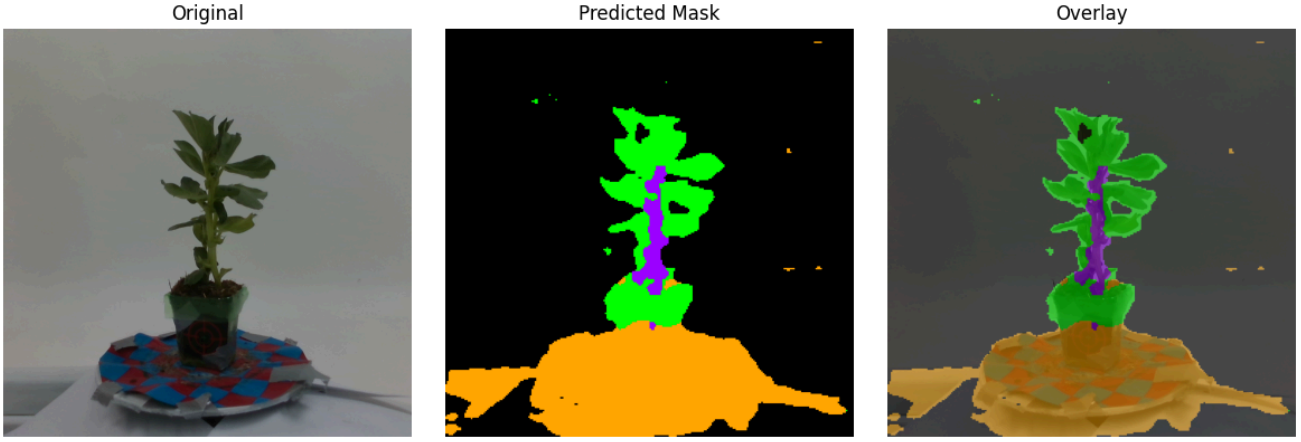
Original | Predicted Mask | Overlay

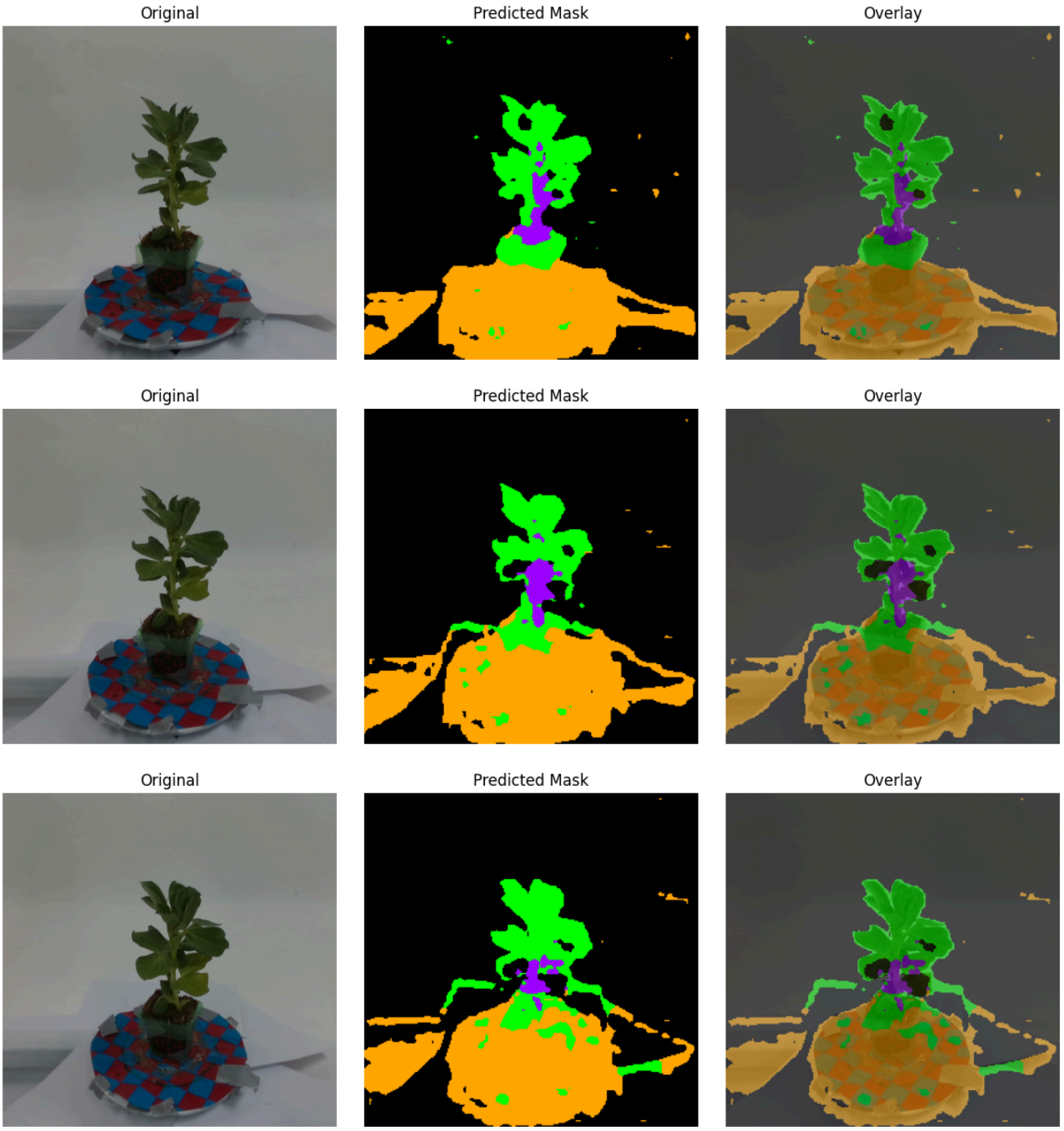


Original | Predicted Mask | Overlay



Original | Predicted Mask | Overlay





Some issues

- Imbalance with the background class; remove this in next model
- no metrics for the real bean data; need to annotate them by hand
    - really noisy/incorrect data for the real bean data predictions
    - maybe it's overfitting? need to check on real data first
- replace loss function with dice coefficient instead of cross entropy
- i need more compute :(