Data Science Final

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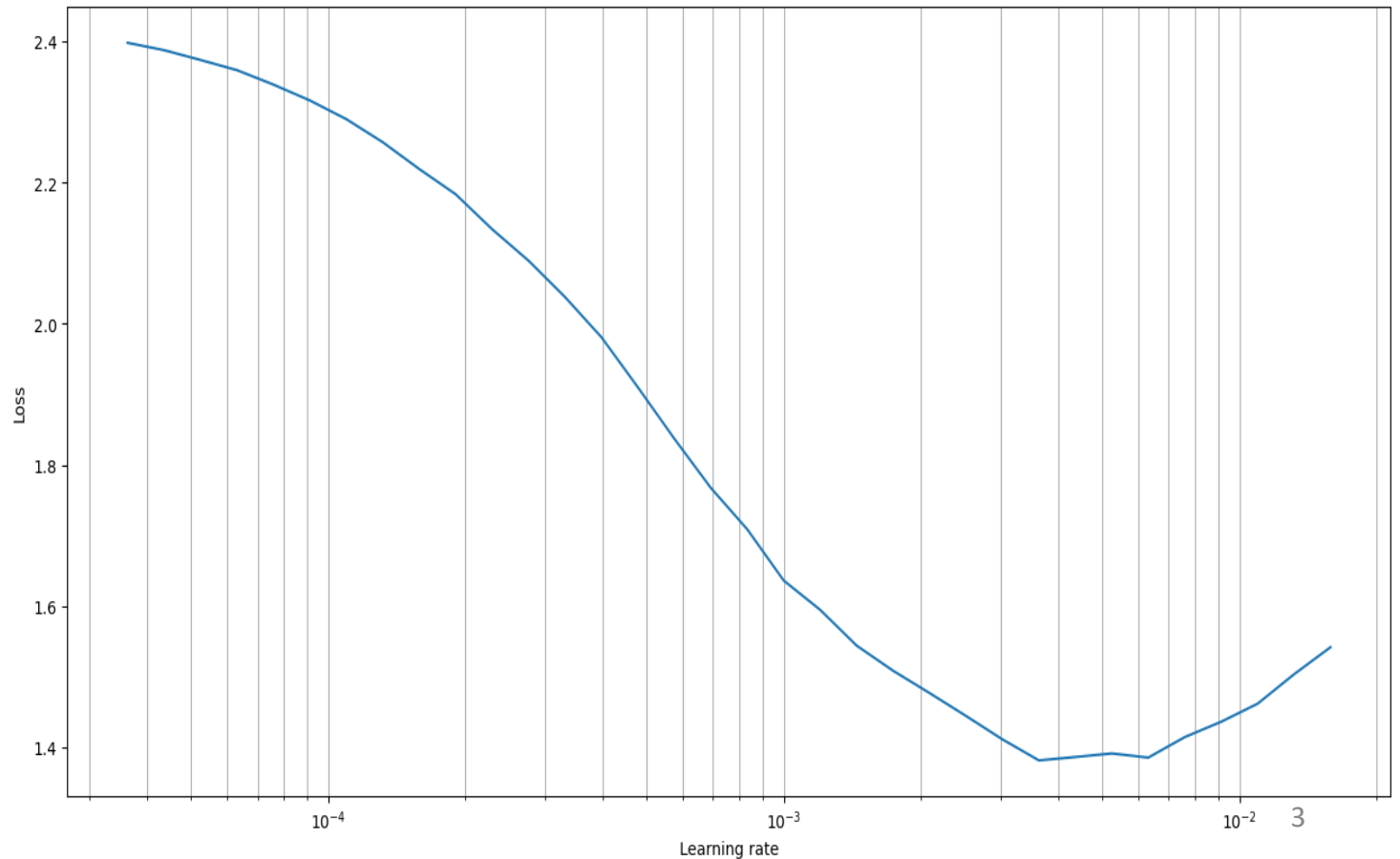
Date：2023/12/20

Outline

- Introduction
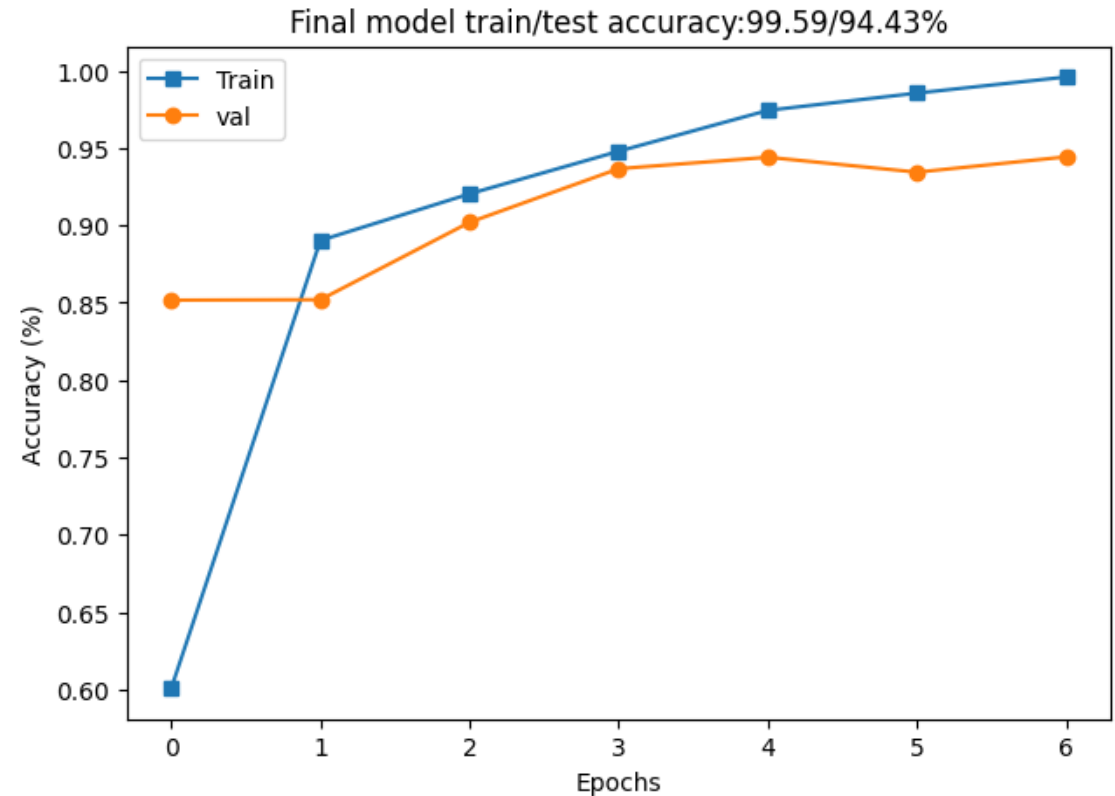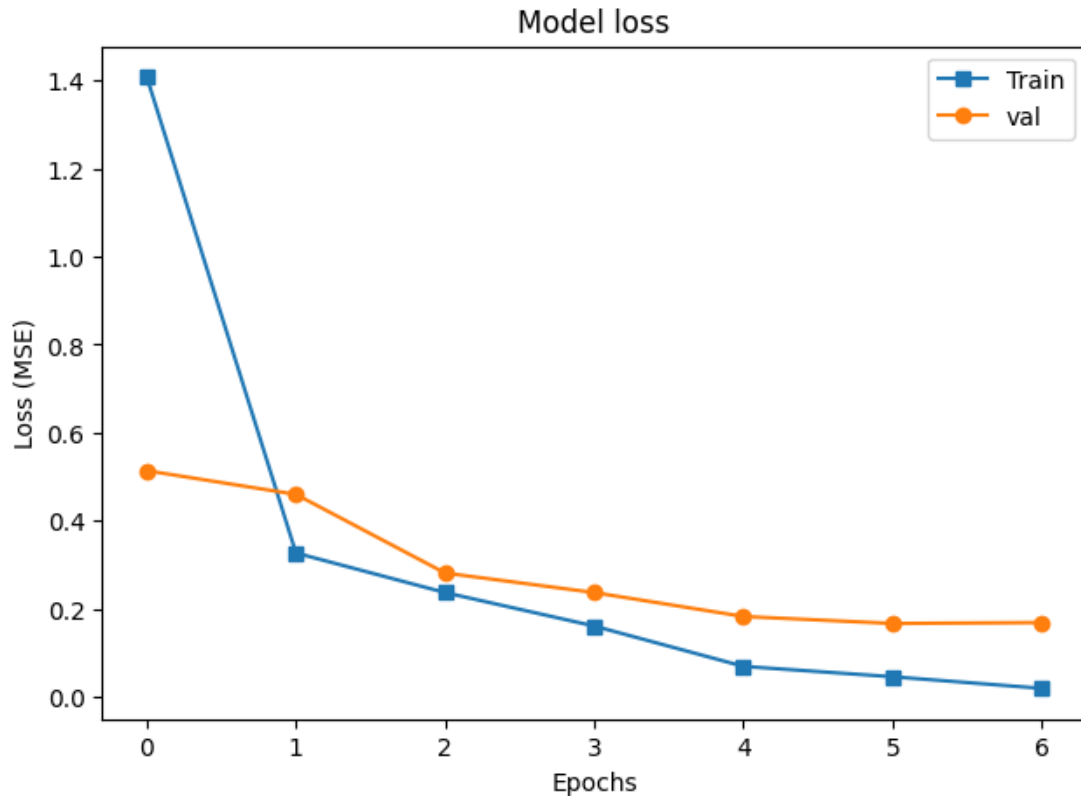- Results & Discussion
- Conclusion

Introduction

- Model selection: Resnet50
- Optimizer: Adam
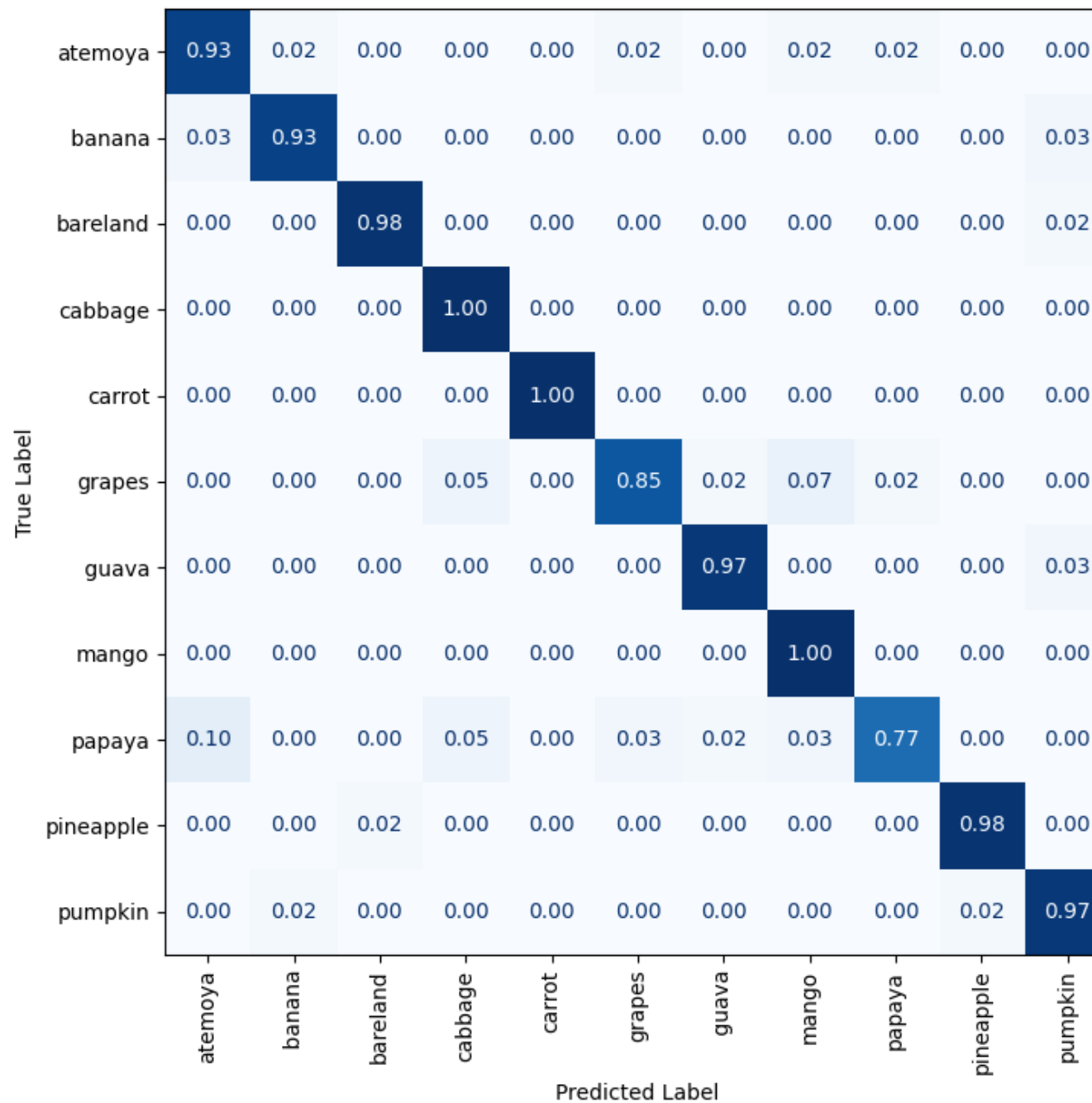 - lr=0.001
- Training size ratio =0.8

Result

- model train=99.59%, validation accuracy=94.43%

Result

Result

true label: guava (0.000)
pred label: pumpkin (0.999)

true label: papaya (0.002)
pred label: atemoya (0.997)

true label: papaya (0.008)
pred label: atemoya (0.989)

true label: papaya (0.018)
pred label: mango (0.981)

true label: papaya (0.005)
pred label: atemoya (0.979)

true label: banana (0.025)
pred label: pumpkin (0.974)

true label: papaya (0.038)
pred label: atemoya (0.955)

true label: papaya (0.038)
pred label: atemoya (0.938)

true label: papaya (0.106)
pred label: atemoya (0.867)

true label: papaya (0.003)
pred label: guava (0.867)

true label: papaya (0.116)
pred label: atemoya (0.827)

true label: pumpkin (0.043)
pred label: banana (0.798)

true label: banana (0.217)
pred label: pumpkin (0.774)

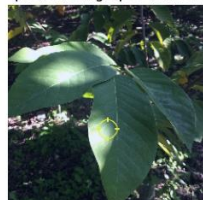true label: grapes (0.009)
pred label: mango (0.757)

true label: papaya (0.124)
pred label: cabbage (0.726)

true label: mango (0.191)
pred label: atemoya (0.720)

true label: atemoya (0.215)
pred label: grapes (0.703)

true label: grapes (0.146)
pred label: mango (0.693)

true label: grapes (0.012)
pred label: papaya (0.673)

true label: pumpkin (0.319)
pred label: pineapple (0.661)

true label: papaya (0.268)
pred label: mango (0.655)

true label: pumpkin (0.299)
pred label: guava (0.646)

true label: pumpkin (0.310)
pred label: banana (0.634)

true label: papaya (0.344)
pred label: atemoya (0.544)

true label: grapes (0.472)
pred label: papaya (0.524)

Conclusion

- The best performance was optimizer: Adam , with validation accuracy = {0.9443}

- In the future, we hope to learn more from each optimizer and how it works so as to adjust parameters and make better results efficiently.

Thanks for your attention!