/home/kurekj/anaconda3/envs/Python3.10\_Tensor2.12/bin/python /home/kurekj/AI4PhenoEOSC/linden/LindenClassification/2023-08-05/ClassificationLindenGen3.py

2023-08-06 14:15:34.718653: I tensorflow/core/util/port.cc:110] oneDNN custom operations are on. You may see slightly different numerical results due to floating-point round-off errors from different computation orders. To turn them off, set the environment variable `TF\_ENABLE\_ONEDNN\_OPTS=0`.

2023-08-06 14:15:34.770760: I tensorflow/core/platform/cpu\_feature\_guard.cc:182] This TensorFlow binary is optimized to use available CPU instructions in performance-critical operations.

To enable the following instructions: AVX2 AVX512F AVX512\_VNNI FMA, in other operations, rebuild TensorFlow with the appropriate compiler flags.

2023-08-06 14:15:35.502641: W tensorflow/compiler/tf2tensorrt/utils/py\_utils.cc:38] TF-TRT Warning: Could not find TensorRT

3.10.11

2.12.0

2023-08-06 14:15:40.674605: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1635] Created device /device:GPU:0 with 40811 MB memory: -> device: 0, name: NVIDIA A40, pci bus id: 0000:17:00.0, compute capability: 8.6

2023-08-06 14:15:40.676400: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1635] Created device /device:GPU:1 with 40811 MB memory: -> device: 1, name: NVIDIA A40, pci bus id: 0000:ca:00.0, compute capability: 8.6

Loading images: 0%| | 0/18200 [00:00<?, ?it/s]Num of GPUs available: /device:GPU:0

Loading images: 100%|██████████| 18200/18200 [01:35<00:00, 191.41it/s]

Shape of images\_list: (1442, 384, 321, 3)

Shape of labels: (1442,)

Number of images in class 0: 721

Number of images in class 1: 721

After loaded images

95.40758377099999

(1009, 384, 321, 3)

(1009,)

2023-08-06 14:17:16.329142: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1635] Created device /job:localhost/replica:0/task:0/device:GPU:0 with 40811 MB memory: -> device: 0, name: NVIDIA A40, pci bus id: 0000:17:00.0, compute capability: 8.6

2023-08-06 14:17:16.329946: I tensorflow/core/common\_runtime/gpu/gpu\_device.cc:1635] Created device /job:localhost/replica:0/task:0/device:GPU:1 with 40811 MB memory: -> device: 1, name: NVIDIA A40, pci bus id: 0000:ca:00.0, compute capability: 8.6

Downloading data from https://storage.googleapis.com/tensorflow/keras-applications/vgg16/vgg16\_weights\_tf\_dim\_ordering\_tf\_kernels\_notop.h5

58889256/58889256 [==============================] - 5s 0us/step

Epoch 1/500

2023-08-06 14:17:27.945292: I tensorflow/compiler/xla/stream\_executor/cuda/cuda\_dnn.cc:424] Loaded cuDNN version 8600

2023-08-06 14:17:30.077642: E tensorflow/compiler/xla/stream\_executor/gpu/asm\_compiler.cc:114] \*\*\* WARNING \*\*\* You are using ptxas 10.1.243, which is older than 11.1. ptxas before 11.1 is known to miscompile XLA code, leading to incorrect results or invalid-address errors.

2023-08-06 14:17:30.081657: W tensorflow/compiler/xla/stream\_executor/gpu/asm\_compiler.cc:231] Falling back to the CUDA driver for PTX compilation; ptxas does not support CC 8.6

2023-08-06 14:17:30.081696: W tensorflow/compiler/xla/stream\_executor/gpu/asm\_compiler.cc:234] Used ptxas at ptxas

2023-08-06 14:17:30.081849: W tensorflow/compiler/xla/stream\_executor/gpu/redzone\_allocator.cc:317] UNIMPLEMENTED: ptxas ptxas too old. Falling back to the driver to compile.

Relying on driver to perform ptx compilation.

Modify $PATH to customize ptxas location.

This message will be only logged once.

2023-08-06 14:17:31.256502: I tensorflow/compiler/xla/stream\_executor/cuda/cuda\_blas.cc:637] TensorFloat-32 will be used for the matrix multiplication. This will only be logged once.

2023-08-06 14:17:31.264164: I tensorflow/compiler/xla/service/service.cc:169] XLA service 0x7fa01dc69f50 initialized for platform CUDA (this does not guarantee that XLA will be used). Devices:

2023-08-06 14:17:31.264194: I tensorflow/compiler/xla/service/service.cc:177] StreamExecutor device (0): NVIDIA A40, Compute Capability 8.6

2023-08-06 14:17:31.264199: I tensorflow/compiler/xla/service/service.cc:177] StreamExecutor device (1): NVIDIA A40, Compute Capability 8.6

2023-08-06 14:17:31.270342: I tensorflow/compiler/mlir/tensorflow/utils/dump\_mlir\_util.cc:269] disabling MLIR crash reproducer, set env var `MLIR\_CRASH\_REPRODUCER\_DIRECTORY` to enable.

2023-08-06 14:17:31.354426: E tensorflow/compiler/xla/stream\_executor/gpu/asm\_compiler.cc:114] \*\*\* WARNING \*\*\* You are using ptxas 10.1.243, which is older than 11.1. ptxas before 11.1 is known to miscompile XLA code, leading to incorrect results or invalid-address errors.

2023-08-06 14:17:31.379648: I ./tensorflow/compiler/jit/device\_compiler.h:180] Compiled cluster using XLA! This line is logged at most once for the lifetime of the process.

2023-08-06 14:17:31.471254: E tensorflow/compiler/xla/stream\_executor/gpu/asm\_compiler.cc:114] \*\*\* WARNING \*\*\* You are using ptxas 10.1.243, which is older than 11.1. ptxas before 11.1 is known to miscompile XLA code, leading to incorrect results or invalid-address errors.

2023-08-06 14:17:31.578422: E tensorflow/compiler/xla/stream\_executor/gpu/asm\_compiler.cc:114] \*\*\* WARNING \*\*\* You are using ptxas 10.1.243, which is older than 11.1. ptxas before 11.1 is known to miscompile XLA code, leading to incorrect results or invalid-address errors.

2023-08-06 14:17:31.678393: E tensorflow/compiler/xla/stream\_executor/gpu/asm\_compiler.cc:114] \*\*\* WARNING \*\*\* You are using ptxas 10.1.243, which is older than 11.1. ptxas before 11.1 is known to miscompile XLA code, leading to incorrect results or invalid-address errors.

32/32 [==============================] - 13s 183ms/step - loss: 0.7614 - accuracy: 0.7017 - val\_loss: 0.3510 - val\_accuracy: 0.8472

Epoch 2/500

32/32 [==============================] - 4s 129ms/step - loss: 0.3809 - accuracy: 0.8226 - val\_loss: 0.2953 - val\_accuracy: 0.8519

Epoch 3/500

32/32 [==============================] - 4s 125ms/step - loss: 0.3291 - accuracy: 0.8603 - val\_loss: 0.2527 - val\_accuracy: 0.8843

Epoch 4/500

32/32 [==============================] - 4s 127ms/step - loss: 0.2995 - accuracy: 0.8801 - val\_loss: 0.2697 - val\_accuracy: 0.9074

Epoch 5/500

32/32 [==============================] - 4s 126ms/step - loss: 0.2662 - accuracy: 0.9039 - val\_loss: 0.2254 - val\_accuracy: 0.9120

Epoch 6/500

32/32 [==============================] - 4s 124ms/step - loss: 0.2475 - accuracy: 0.8969 - val\_loss: 0.2231 - val\_accuracy: 0.8935

Epoch 7/500

32/32 [==============================] - 4s 135ms/step - loss: 0.2295 - accuracy: 0.8979 - val\_loss: 0.2093 - val\_accuracy: 0.9074

Epoch 8/500

32/32 [==============================] - 4s 133ms/step - loss: 0.2035 - accuracy: 0.9167 - val\_loss: 0.2080 - val\_accuracy: 0.8981

Epoch 9/500

32/32 [==============================] - 4s 132ms/step - loss: 0.1983 - accuracy: 0.9227 - val\_loss: 0.2357 - val\_accuracy: 0.9028

Epoch 10/500

32/32 [==============================] - 4s 138ms/step - loss: 0.1987 - accuracy: 0.9207 - val\_loss: 0.2052 - val\_accuracy: 0.9028

Epoch 11/500

32/32 [==============================] - 4s 125ms/step - loss: 0.1851 - accuracy: 0.9277 - val\_loss: 0.1932 - val\_accuracy: 0.9120

Epoch 12/500

32/32 [==============================] - 4s 126ms/step - loss: 0.1698 - accuracy: 0.9277 - val\_loss: 0.1920 - val\_accuracy: 0.9074

Epoch 13/500

32/32 [==============================] - 4s 127ms/step - loss: 0.1738 - accuracy: 0.9286 - val\_loss: 0.1979 - val\_accuracy: 0.9167

Epoch 14/500

32/32 [==============================] - 4s 139ms/step - loss: 0.1372 - accuracy: 0.9435 - val\_loss: 0.1828 - val\_accuracy: 0.9259

Epoch 15/500

32/32 [==============================] - 4s 121ms/step - loss: 0.1452 - accuracy: 0.9435 - val\_loss: 0.1828 - val\_accuracy: 0.9028

Epoch 16/500

32/32 [==============================] - 4s 126ms/step - loss: 0.1355 - accuracy: 0.9445 - val\_loss: 0.1799 - val\_accuracy: 0.9213

Epoch 17/500

32/32 [==============================] - 4s 127ms/step - loss: 0.1420 - accuracy: 0.9514 - val\_loss: 0.1899 - val\_accuracy: 0.9167

Epoch 18/500

32/32 [==============================] - 4s 122ms/step - loss: 0.1283 - accuracy: 0.9504 - val\_loss: 0.1869 - val\_accuracy: 0.9167

Epoch 19/500

32/32 [==============================] - 4s 133ms/step - loss: 0.1299 - accuracy: 0.9485 - val\_loss: 0.1863 - val\_accuracy: 0.9213

Epoch 20/500

32/32 [==============================] - 4s 130ms/step - loss: 0.1142 - accuracy: 0.9554 - val\_loss: 0.1771 - val\_accuracy: 0.9259

Epoch 21/500

32/32 [==============================] - 4s 121ms/step - loss: 0.1142 - accuracy: 0.9534 - val\_loss: 0.1857 - val\_accuracy: 0.9259

Epoch 22/500

32/32 [==============================] - 4s 126ms/step - loss: 0.1150 - accuracy: 0.9534 - val\_loss: 0.1733 - val\_accuracy: 0.9259

Epoch 23/500

32/32 [==============================] - 4s 127ms/step - loss: 0.1045 - accuracy: 0.9703 - val\_loss: 0.1775 - val\_accuracy: 0.9213

Epoch 24/500

32/32 [==============================] - 4s 127ms/step - loss: 0.0969 - accuracy: 0.9584 - val\_loss: 0.1721 - val\_accuracy: 0.9306

Epoch 25/500

32/32 [==============================] - 4s 132ms/step - loss: 0.0936 - accuracy: 0.9673 - val\_loss: 0.1756 - val\_accuracy: 0.9444

Epoch 26/500

32/32 [==============================] - 4s 126ms/step - loss: 0.0932 - accuracy: 0.9673 - val\_loss: 0.1669 - val\_accuracy: 0.9398

Epoch 27/500

32/32 [==============================] - 4s 120ms/step - loss: 0.0682 - accuracy: 0.9772 - val\_loss: 0.1782 - val\_accuracy: 0.9352

Epoch 28/500

32/32 [==============================] - 4s 120ms/step - loss: 0.0837 - accuracy: 0.9713 - val\_loss: 0.1735 - val\_accuracy: 0.9352

Epoch 29/500

32/32 [==============================] - 4s 122ms/step - loss: 0.0757 - accuracy: 0.9732 - val\_loss: 0.1752 - val\_accuracy: 0.9444

Epoch 30/500

32/32 [==============================] - 4s 132ms/step - loss: 0.0762 - accuracy: 0.9732 - val\_loss: 0.1829 - val\_accuracy: 0.9306

Epoch 31/500

32/32 [==============================] - 4s 134ms/step - loss: 0.0909 - accuracy: 0.9693 - val\_loss: 0.1863 - val\_accuracy: 0.9352

Epoch 32/500

32/32 [==============================] - 4s 124ms/step - loss: 0.0737 - accuracy: 0.9782 - val\_loss: 0.1725 - val\_accuracy: 0.9352

Epoch 33/500

32/32 [==============================] - 4s 121ms/step - loss: 0.0564 - accuracy: 0.9832 - val\_loss: 0.1931 - val\_accuracy: 0.9213

Epoch 34/500

32/32 [==============================] - 4s 122ms/step - loss: 0.0563 - accuracy: 0.9822 - val\_loss: 0.1975 - val\_accuracy: 0.9306

Epoch 35/500

32/32 [==============================] - 4s 122ms/step - loss: 0.0646 - accuracy: 0.9782 - val\_loss: 0.1800 - val\_accuracy: 0.9398

Epoch 36/500

32/32 [==============================] - 4s 124ms/step - loss: 0.0695 - accuracy: 0.9762 - val\_loss: 0.1810 - val\_accuracy: 0.9352

2023-08-06 14:19:59.456057: I tensorflow/core/common\_runtime/executor.cc:1197] [/device:CPU:0] (DEBUG INFO) Executor start aborting (this does not indicate an error and you can ignore this message): INVALID\_ARGUMENT: You must feed a value for placeholder tensor 'inputs' with dtype float and shape [?,64]

[[{{node inputs}}]]

2023-08-06 14:19:59.939047: I tensorflow/core/common\_runtime/executor.cc:1197] [/device:CPU:0] (DEBUG INFO) Executor start aborting (this does not indicate an error and you can ignore this message): INVALID\_ARGUMENT: You must feed a value for placeholder tensor 'inputs' with dtype float and shape [?,64]

[[{{node inputs}}]]

WARNING:absl:Found untraced functions such as \_jit\_compiled\_convolution\_op, \_jit\_compiled\_convolution\_op, \_jit\_compiled\_convolution\_op, \_jit\_compiled\_convolution\_op, \_jit\_compiled\_convolution\_op while saving (showing 5 of 13). These functions will not be directly callable after loading.

7/7 [==============================] - 1s 204ms/step - loss: 0.1969 - accuracy: 0.9171

Test accuracy: 0.92

7/7 [==============================] - 1s 93ms/step

Process finished with exit code 0