MLP wo Horovod

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2021-11-18 09:33:02.688221: I tensorflow/core/platform/cpu_feature_guard.cc:151] This TensorFlow binary is optimized with oneAPI Deep Neural Network Library (oneDNN) to use the following CPU instructions in performance-critical operations: AVX2 FMA
To enable them in other operations, rebuild TensorFlow with the appropriate compiler flags.
Epoch 1/50
672/672 - 1s - loss: 0.0057 - mean_squared_error: 0.0057 - mean_absolute_error: 0.0427 - root_mean_squared_error: 0.0753 - val_loss: 9.1464e-04 - val_mean_squared_error: 9.1464e-04 - val_mean_absolute_error: 0.0245 - val_root_mean_squared_error: 0.0302 - 1s/epoch - 2ms/step
Epoch 2/50
672/672 - 1s - loss: 6.0553e-04 - mean_squared_error: 6.0553e-04 - mean_absolute_error: 0.0176 - root_mean_squared_error: 0.0246 - val_loss: 1.7737e-04 - val_mean_squared_error: 1.7737e-04 - val_mean_absolute_error: 0.0099 - val_root_mean_squared_error: 0.0133 - 716ms/epoch - 1ms/step
Epoch 3/50
672/672 - 1s - loss: 4.9430e-04 - mean_squared_error: 4.9430e-04 - mean_absolute_error: 0.0156 - root_mean_squared_error: 0.0222 - val_loss: 1.3000e-04 - val_mean_squared_error: 1.3000e-04 - val_mean_absolute_error: 0.0084 - val_root_mean_squared_error: 0.0114 - 777ms/epoch - 1ms/step
Epoch 4/50
672/672 - 1s - loss: 4.3500e-04 - mean_squared_error: 4.3500e-04 - mean_absolute_error: 0.0147 - root_mean_squared_error: 0.0209 - val_loss: 5.4259e-04 - val_mean_squared_error: 5.4259e-04 - val_mean_absolute_error: 0.0203 - val_root_mean_squared_error: 0.0233 - 808ms/epoch - 1ms/step
Epoch 5/50

672/672 - 1s - loss: 4.2283e-04 - mean_squared_error: 4.2283e-04 - mean_absolute_error: 0.0145 - root_mean_squared_error: 0.0206 - val_loss: 2.6169e-04 - val_mean_squared_error: 2.6169e-04 - val_mean_absolute_error: 0.0130 - val_root_mean_squared_error: 0.0162 - 817ms/epoch - 1ms/step
Epoch 6/50
672/672 - 1s - loss: 3.7522e-04 - mean_squared_error: 3.7522e-04 - mean_absolute_error: 0.0135 - root_mean_squared_error: 0.0194 - val_loss: 1.4547e-04 - val_mean_squared_error: 1.4547e-04 - val_mean_absolute_error: 0.0090 - val_root_mean_squared_error: 0.0121 - 857ms/epoch - 1ms/step
Epoch 7/50
672/672 - 1s - loss: 3.4566e-04 - mean_squared_error: 3.4566e-04 - mean_absolute_error: 0.0130 - root_mean_squared_error: 0.0186 - val_loss: 3.8721e-04 - val_mean_squared_error: 3.8721e-04 - val_mean_absolute_error: 0.0162 - val_root_mean_squared_error: 0.0197 - 896ms/epoch - 1ms/step
Epoch 8/50
672/672 - 1s - loss: 3.5158e-04 - mean_squared_error: 3.5158e-04 - mean_absolute_error: 0.0129 - root_mean_squared_error: 0.0188 - val_loss: 1.2834e-04 - val_mean_squared_error: 1.2834e-04 - val_mean_absolute_error: 0.0087 - val_root_mean_squared_error: 0.0113 - 922ms/epoch - 1ms/step
Epoch 9/50
672/672 - 1s - loss: 3.2780e-04 - mean_squared_error: 3.2780e-04 - mean_absolute_error: 0.0125 - root_mean_squared_error: 0.0181 - val_loss: 4.0346e-04 - val_mean_squared_error: 4.0346e-04 - val_mean_absolute_error: 0.0176 - val_root_mean_squared_error: 0.0201 - 927ms/epoch - 1ms/step
Epoch 10/50
672/672 - 1s - loss: 3.2133e-04 - mean_squared_error: 3.2133e-04 - mean_absolute_error: 0.0124 - root_mean_squared_error: 0.0179 - val_loss: 3.8414e-04 - val_mean_squared_error: 3.8414e-04 - val_mean_absolute_error: 0.0172 - val_root_mean_squared_error: 0.0196 - 938ms/epoch - 1ms/step
Epoch 11/50
672/672 - 1s - loss: 3.1780e-04 - mean_squared_error: 3.1780e-04 - mean_absolute_error: 0.0122 - root_mean_squared_error: 0.0178 - val_loss: 1.8352e-04 - val_mean_squared_error: 1.8352e-04 - val_mean_absolute_error: 0.0110 - val_root_mean_squared_error: 0.0135 - 950ms/epoch - 1ms/step
Epoch 12/50
672/672 - 1s - loss: 2.9556e-04 - mean_squared_error: 2.9556e-04 -

mean_absolute_error: 0.0118 - root_mean_squared_error: 0.0172 - val_loss: 2.6200e-04 - val_mean_squared_error: 2.6200e-04 - val_mean_absolute_error: 0.0130 - val_root_mean_squared_error: 0.0162 - 950ms/epoch - 1ms/step
Epoch 13/50
672/672 - 1s - loss: 3.0619e-04 - mean_squared_error: 3.0619e-04 - mean_absolute_error: 0.0120 - root_mean_squared_error: 0.0175 - val_loss: 1.6273e-04 - val_mean_squared_error: 1.6273e-04 - val_mean_absolute_error: 0.0098 - val_root_mean_squared_error: 0.0128 - 1s/epoch - 2ms/step
Epoch 14/50
672/672 - 1s - loss: 2.8377e-04 - mean_squared_error: 2.8377e-04 - mean_absolute_error: 0.0116 - root_mean_squared_error: 0.0168 - val_loss: 1.2699e-04 - val_mean_squared_error: 1.2699e-04 - val_mean_absolute_error: 0.0086 - val_root_mean_squared_error: 0.0113 - 1s/epoch - 2ms/step
Epoch 15/50
672/672 - 1s - loss: 2.9200e-04 - mean_squared_error: 2.9200e-04 - mean_absolute_error: 0.0115 - root_mean_squared_error: 0.0171 - val_loss: 1.6757e-04 - val_mean_squared_error: 1.6757e-04 - val_mean_absolute_error: 0.0106 - val_root_mean_squared_error: 0.0129 - 1s/epoch - 2ms/step
Epoch 16/50
672/672 - 1s - loss: 2.7706e-04 - mean_squared_error: 2.7706e-04 - mean_absolute_error: 0.0114 - root_mean_squared_error: 0.0166 - val_loss: 1.2770e-04 - val_mean_squared_error: 1.2770e-04 - val_mean_absolute_error: 0.0088 - val_root_mean_squared_error: 0.0113 - 972ms/epoch - 1ms/step
Epoch 17/50
672/672 - 1s - loss: 2.6212e-04 - mean_squared_error: 2.6212e-04 - mean_absolute_error: 0.0112 - root_mean_squared_error: 0.0162 - val_loss: 1.8992e-04 - val_mean_squared_error: 1.8992e-04 - val_mean_absolute_error: 0.0114 - val_root_mean_squared_error: 0.0138 - 990ms/epoch - 1ms/step
Epoch 18/50
672/672 - 1s - loss: 2.7066e-04 - mean_squared_error: 2.7066e-04 - mean_absolute_error: 0.0113 - root_mean_squared_error: 0.0165 - val_loss: 1.1153e-04 - val_mean_squared_error: 1.1153e-04 - val_mean_absolute_error: 0.0081 - val_root_mean_squared_error: 0.0106 - 1s/epoch - 2ms/step
Epoch 19/50
672/672 - 1s - loss: 2.6715e-04 - mean_squared_error: 2.6715e-04 - mean_absolute_error: 0.0111 - root_mean_squared_error: 0.0163 - val_loss: 1.1494e-

04 - val_mean_squared_error: 1.1494e-04 - val_mean_absolute_error: 0.0083 - val_root_mean_squared_error: 0.0107 - 844ms/epoch - 1ms/step
Epoch 20/50
672/672 - 1s - loss: 2.5887e-04 - mean_squared_error: 2.5887e-04 - mean_absolute_error: 0.0110 - root_mean_squared_error: 0.0161 - val_loss: 2.1999e-04 - val_mean_squared_error: 2.1999e-04 - val_mean_absolute_error: 0.0121 - val_root_mean_squared_error: 0.0148 - 870ms/epoch - 1ms/step
Epoch 21/50
672/672 - 1s - loss: 2.5061e-04 - mean_squared_error: 2.5061e-04 - mean_absolute_error: 0.0109 - root_mean_squared_error: 0.0158 - val_loss: 1.4050e-04 - val_mean_squared_error: 1.4050e-04 - val_mean_absolute_error: 0.0092 - val_root_mean_squared_error: 0.0119 - 861ms/epoch - 1ms/step
Epoch 22/50
672/672 - 1s - loss: 2.4621e-04 - mean_squared_error: 2.4621e-04 - mean_absolute_error: 0.0107 - root_mean_squared_error: 0.0157 - val_loss: 3.5383e-04 - val_mean_squared_error: 3.5383e-04 - val_mean_absolute_error: 0.0166 - val_root_mean_squared_error: 0.0188 - 825ms/epoch - 1ms/step
Epoch 23/50
672/672 - 1s - loss: 2.4927e-04 - mean_squared_error: 2.4927e-04 - mean_absolute_error: 0.0108 - root_mean_squared_error: 0.0158 - val_loss: 1.6196e-04 - val_mean_squared_error: 1.6196e-04 - val_mean_absolute_error: 0.0099 - val_root_mean_squared_error: 0.0127 - 800ms/epoch - 1ms/step
Epoch 24/50
672/672 - 1s - loss: 2.4803e-04 - mean_squared_error: 2.4803e-04 - mean_absolute_error: 0.0108 - root_mean_squared_error: 0.0157 - val_loss: 7.1673e-04 - val_mean_squared_error: 7.1673e-04 - val_mean_absolute_error: 0.0250 - val_root_mean_squared_error: 0.0268 - 826ms/epoch - 1ms/step
Epoch 25/50
672/672 - 1s - loss: 2.4247e-04 - mean_squared_error: 2.4247e-04 - mean_absolute_error: 0.0106 - root_mean_squared_error: 0.0156 - val_loss: 7.1528e-04 - val_mean_squared_error: 7.1528e-04 - val_mean_absolute_error: 0.0243 - val_root_mean_squared_error: 0.0267 - 791ms/epoch - 1ms/step
Epoch 26/50
672/672 - 1s - loss: 2.4776e-04 - mean_squared_error: 2.4776e-04 - mean_absolute_error: 0.0107 - root_mean_squared_error: 0.0157 - val_loss: 2.0785e-04 - val_mean_squared_error: 2.0785e-04 - val_mean_absolute_error: 0.0116 -

val_root_mean_squared_error: 0.0144 - 781ms/epoch - 1ms/step
Epoch 27/50
672/672 - 1s - loss: 2.3074e-04 - mean_squared_error: 2.3074e-04 - mean_absolute_error: 0.0105 - root_mean_squared_error: 0.0152 - val_loss: 7.3818e-04 - val_mean_squared_error: 7.3818e-04 - val_mean_absolute_error: 0.0253 - val_root_mean_squared_error: 0.0272 - 764ms/epoch - 1ms/step
Epoch 28/50
Restoring model weights from the end of the best epoch: 18.
672/672 - 1s - loss: 2.4207e-04 - mean_squared_error: 2.4207e-04 - mean_absolute_error: 0.0106 - root_mean_squared_error: 0.0156 - val_loss: 5.6761e-04 - val_mean_squared_error: 5.6761e-04 - val_mean_absolute_error: 0.0220 - val_root_mean_squared_error: 0.0238 - 777ms/epoch - 1ms/step
Epoch 00028: early stopping
Used training time: 25.620168
Testing set: MSE 0.000321, RMSE: 0.017924, MAE: 0.015290