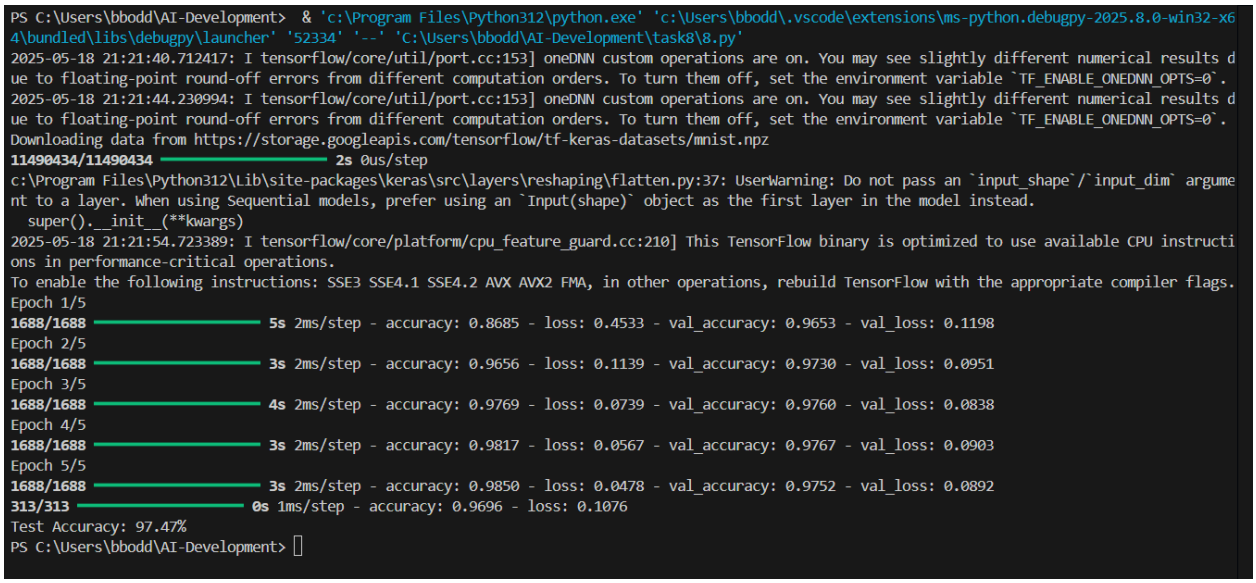
PS C:\Users\bbodd\AI-Development> & 'c:\Program Files\Python312\python.exe' 'c:\Users\bbodd\.vscode\extensions\ms-python.debugpy-2025.8.0-win32-x64\bundled\libs\debugpy\launcher' '52334' '--' 'C:\Users\bbodd\AI-Development\task8\8.py'
2025-05-18 21:21:40.712417: I tensorflow/core/util/port.cc:153] oneDNN 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`.
2025-05-18 21:21:44.230994: I tensorflow/core/util/port.cc:153] 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`.
Downloading data from https://storage.googleapis.com/tensorflow/tf-keras-datasets/mnist.npz
11490434/11490434 2s 0us/step
c:\Program Files\Python312\Lib\site-packages\keras\src\layers\reshaping\flatten.py:37: UserWarning: Do not pass an `input_shape`/`input_dim` argument to a layer. When using Sequential models, prefer using an `Input(shape)` object as the first layer in the model instead.
super().__init__(**kwargs)
2025-05-18 21:21:54.723389: I tensorflow/core/platform/cpu_feature_guard.cc:210] This TensorFlow binary is optimized to use available CPU instructions in performance-critical operations.
To enable the following instructions: SSE3 SSE4.1 SSE4.2 AVX AVX2 FMA, in other operations, rebuild TensorFlow with the appropriate compiler flags.
Epoch 1/5
1688/1688 5s 2ms/step - accuracy: 0.8685 - loss: 0.4533 - val_accuracy: 0.9653 - val_loss: 0.1198
Epoch 2/5
1688/1688 3s 2ms/step - accuracy: 0.9656 - loss: 0.1139 - val_accuracy: 0.9730 - val_loss: 0.0951
Epoch 3/5
1688/1688 4s 2ms/step - accuracy: 0.9769 - loss: 0.0739 - val_accuracy: 0.9760 - val_loss: 0.0838
Epoch 4/5
1688/1688 3s 2ms/step - accuracy: 0.9817 - loss: 0.0567 - val_accuracy: 0.9767 - val_loss: 0.0903
Epoch 5/5
1688/1688 3s 2ms/step - accuracy: 0.9850 - loss: 0.0478 - val_accuracy: 0.9752 - val_loss: 0.0892
313/313 0s 1ms/step - accuracy: 0.9696 - loss: 0.1076
Test Accuracy: 97.47%
PS C:\Users\bbodd\AI-Development>