

[illegible]

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Epoch 40 loss 3.8206068822429513 correct 47 time 57.60s time per epoch 1.40s
Epoch 50 loss 3.374021549755926 correct 48 time 71.43s time per epoch 1.40s
Epoch 60 loss 2.3810731339270083 correct 49 time 85.20s time per epoch 1.40s
Epoch 70 loss 1.619473534116222 correct 46 time 98.98s time per epoch 1.39s
Epoch 80 loss 2.62678262333655 correct 49 time 112.70s time per epoch 1.39s
Epoch 90 loss 2.3393019368962915 correct 49 time 126.44s time per epoch 1.39s
Epoch 100 loss 1.7873210729655682 correct 50 time 140.18s time per epoch 1.39s
Epoch 110 loss 1.074079664942238 correct 50 time 153.97s time per epoch 1.39s
Epoch 120 loss 1.759821848904663 correct 50 time 167.73s time per epoch 1.39s
Epoch 130 loss 0.6410341844847615 correct 50 time 181.50s time per epoch 1.39s
Epoch 140 loss 0.42725729411551483 correct 50 time 195.25s time per epoch 1.38s
Epoch 150 loss 0.3803554718120374 correct 50 time 209.04s time per epoch 1.38s
Epoch 160 loss 0.6721461643509723 correct 50 time 223.20s time per epoch 1.39s
Epoch 170 loss 0.5742892264020044 correct 50 time 238.27s time per epoch 1.39s
Epoch 180 loss 0.8319282409943765 correct 50 time 253.28s time per epoch 1.40s
Epoch 190 loss 0.49926423953554727 correct 50 time 268.29s time per epoch 1.40s
Epoch 200 loss 0.6805619185615739 correct 50 time 283.77s time per epoch 1.41s
Epoch 210 loss 1.0074121208991353 correct 50 time 299.20s time per epoch 1.42s
Epoch 220 loss 0.3680246122168671 correct 50 time 314.54s time per epoch 1.42s
Epoch 230 loss 0.4746329277354064 correct 50 time 329.56s time per epoch 1.43s
Epoch 240 loss 0.6123216199014468 correct 50 time 344.68s time per epoch 1.43s
Epoch 250 loss 0.5780413248770209 correct 50 time 359.92s time per epoch 1.43s
Epoch 260 loss 0.8160247193127806 correct 50 time 374.99s time per epoch 1.44s
Epoch 270 loss 0.754561749733112 correct 50 time 390.08s time per epoch 1.44s
Epoch 280 loss 0.15056632163918357 correct 50 time 405.18s time per epoch 1.44s
Epoch 290 loss 0.21470546061614496 correct 50 time 420.45s time per epoch 1.44s
Epoch 300 loss 0.4210963156368792 correct 50 time 435.58s time per epoch 1.45s
Epoch 310 loss 0.19411553162400305 correct 50 time 450.52s time per epoch 1.45s
Epoch 320 loss 0.4964319201800512 correct 50 time 465.57s time per epoch 1.45s
Epoch 330 loss 0.4999424263761936 correct 50 time 480.61s time per epoch 1.45s
Epoch 340 loss 0.3380044029318727 correct 50 time 495.79s time per epoch 1.45s
Epoch 350 loss 0.27953803901065816 correct 50 time 511.03s time per epoch 1.46s
Epoch 360 loss 0.6042746298198678 correct 50 time 526.04s time per epoch 1.46s
Epoch 370 loss 0.5785738079168321 correct 50 time 541.20s time per epoch 1.46s
Epoch 380 loss 0.383365801580663 correct 50 time 556.49s time per epoch 1.46s
Epoch 390 loss 0.3241101114025531 correct 50 time 571.58s time per epoch 1.46s
Epoch 400 loss 0.490908753028084 correct 50 time 586.69s time per epoch 1.46s
^CTraceback (most recent call last):
  File "/home/ubuntu/proj/mod3-Navxihziq/project/run_fast_tensor.py", line 145, in <module>
    ).train(data, RATE)
  File "/home/ubuntu/proj/mod3-Navxihziq/project/run_fast_tensor.py", line 97, in train
    out = self.model.forward(X).view(y.shape[0])
  File "/home/ubuntu/proj/mod3-Navxihziq/project/run_fast_tensor.py", line 47, in forward
    h = self.layer1.forward(x).relu()
  File "/home/ubuntu/proj/mod3-Navxihziq/project/run_fast_tensor.py", line 63, in forward
    return x @ self.weights.value + self.bias.value.view(1, *self.bias.value.shape)
  File "/home/ubuntu/proj/mod3-Navxihziq/minitorch/tensor.py", line 290, in __matmul__
    return MatMul.apply(self, b)
  File "/home/ubuntu/proj/mod3-Navxihziq/minitorch/tensor_functions.py", line 54, in apply
    c = cls._forward(ctx, *raw_vals)
  File "/home/ubuntu/proj/mod3-Navxihziq/minitorch/tensor_functions.py", line 38, in _forward
    return cls._forward(ctx, *inps) # type: ignore
  File "/home/ubuntu/proj/mod3-Navxihziq/minitorch/tensor_functions.py", line 272, in forward
    return t1.f.matrix_multiply(t1, t2)
  File "/home/ubuntu/proj/mod3-Navxihziq/minitorch/cuda_ops.py", line 140, in matrix_multiply
    tensor_matrix_multiply(blockspergrid, threadsperblock)(
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/dispatcher.py", line 539, in __call__
    return self.dispatcher.call(args, self.griddim, self.blockdim,
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/dispatcher.py", line 683, in call
    kernel.launch(args, griddim, blockdim, stream, sharedmem)
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/dispatcher.py", line 317, in launch
    self._prepare_args(v, stream, retr, kernelargs)
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/dispatcher.py", line 387, in _prepare_args
    devary = wrap_arg(val).to_device(retr, stream)
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/args.py", line 58, in to_device
    devary, conv = auto_device(
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/cudadrv/devicearray.py", line 889, in auto_device
    devobj.copy_to_device(obj, stream=stream)
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/cudadrv/devices.py", line 232, in _require_cuda_context
    return fn(*args, **kws)
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/cudadrv/devicearray.py", line 223, in copy_to_device
    sentry_contiguous(self)
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/cudadrv/devicearray.py", line 849, in sentry_contiguous
    core = array_core(ary)
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/cudadrv/devicearray.py", line 823, in array_core
    return ary[tuple(core_index)]
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/cudadrv/devices.py", line 232, in _require_cuda_context
    return fn(*args, **kws)
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/cudadrv/devicearray.py", line 630, in __getitem__
    return self._do_getitem(item)
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/cudadrv/devicearray.py", line 660, in _do_getitem
    return cls(shape=arr.shape, strides=arr.strides,
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/cuda/cudadrv/devicearray.py", line 93, in __init__
    self._dummy = dummyarray.Array.from_desc(0, shape, strides,
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/misc/dummyarray.py", line 158, in from_desc
    return cls(dims, itemsize)
  File "/home/ubuntu/proj/mod3-Navxihziq/.venv/lib/python3.10/site-packages/numba/misc/dummyarray.py", line 164, in __init__
    self.strides = tuple(dim.stride for dim in self.dims)
KeyboardInterrupt

(.venv) ubuntu@146-235-212-176:~/proj/mod3-Navxihziq$ clear
(.venv) ubuntu@146-235-212-176:~/proj/mod3-Navxihziq$ python project/run_fast_tensor.py --BACKEND cpu --HIDDEN 100 --DATASET split --RATE 0.05
Epoch 0 loss 6.410000847438691 correct 32 time 18.48s time per epoch 18.48s
Epoch 10 loss 3.80197978719173 correct 38 time 119.43s time per epoch 10.86s
Epoch 20 loss 6.566308242065991 correct 45 time 247.98s time per epoch 11.81s
Epoch 30 loss 3.1379563161779465 correct 46 time 379.05s time per epoch 12.23s
Epoch 40 loss 2.643448716911088 correct 47 time 553.44s time per epoch 13.50s
Epoch 50 loss 2.200212750956712 correct 46 time 731.67s time per epoch 14.35s
Epoch 60 loss 1.904767102790877 correct 48 time 888.17s time per epoch 14.56s
Epoch 70 loss 3.4311216228765735 correct 44 time 1026.59s time per epoch 14.46s
Epoch 80 loss 2.21547297325936 correct 49 time 1191.42s time per epoch 14.71s
Epoch 90 loss 0.8008166397144002 correct 49 time 1375.72s time per epoch 15.12s
Epoch 100 loss 0.80968650640977 correct 50 time 1530.82s time per epoch 15.16s

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