Project Report

Team Members:

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Execution Time of the Baseline Application

The execution time of the baseline application was measured using the time command. The results are as follows: Total Training time: 22.301s

```
● bscs-22i-1894@FHPC:-/cuda_projects/Project/src$ make
gcc -Wall -02 - o nn.exe nn.c -lm
./nn.exe
MNIST Neural Network

Epoch 1 - Loss: 0.2672 - Train Accuracy: 91.91% - Time: 7.509s
Epoch 2 - Loss: 0.1039 - Train Accuracy: 96.80% - Time: 7.399s
Epoch 3 - Loss: 0.0707 - Train Accuracy: 97.92% - Time: 7.394s
Total training time: 22.301s
Test Accuracy: 97.11%

● bscs-27i-1894@FHPC:-/cuda_projects/Project/src$ make
./nn.exe
MNIST Neural Network

Epoch 1 - Loss: 0.2694 - Train Accuracy: 91.97% - Time: 7.449s
Epoch 2 - Loss: 0.1079 - Train Accuracy: 96.77% - Time: 7.429s
Total training time: 22.267s
Test Accuracy: 96.80%

□ bscs-27i-1894@FHPC:-/cuda_projects/Project/src$

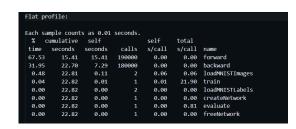
Test Accuracy: 96.80%

□ bscs-27i-1894@FHPC:-/cuda_projects/Project/src$
```

Gprof Profile of the Application

The application was compiled with profiling, executed, and analyzed using profiling report. Below is a summarized profiling report:

Flat Profile:



Call Graph:



Project Report 1