

NUM_TEST= 100
NUM_TRAIN=6000

```
17 public class MNIST {
18
19     public static final int NUM_TEST = 1_00; // can be up to 10k
20     // ^ recommended to change to 100 temporarily
21     public static final int NUM_TRAIN = 6_000; // can be up to 60k
22
23     public static final int K = 3;
24     public static final int IMG_DIM = 28;
25
26     private static final float[][] TRAIN_IMAGES = new float[NUM_TRAIN][IMG_DIM * IMG_DIM];
27     private static final short[] TRAIN_LABELS = new short[NUM_TRAIN];
28     public static final float[][] TEST_IMAGES = new float[NUM_TEST][IMG_DIM * IMG_DIM];
29     private static final short[] TEST_LABELS = new short[NUM_TEST];
30 }
```

PROBLEMS 21 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE

That took 0.778 seconds
Accuracy: 0.0
Spent 3.051 seconds testing 100 images with k = 3
PS C:\Users\micha\.vscode\DSC30 PA5> ^C
PS C:\Users\micha\.vscode\DSC30 PA5>
PS C:\Users\micha\.vscode\DSC30 PA5> c:; cd 'c:\Users\micha\.vscode\DSC30 PA5'; & 'C:\Program Files\Java\jdk-17\bin\java.exe' '@C:\Users\micha\AppData\Local\Temp\cp_2owhds90zs1y6p9ijrzliib2p.argfile' 'MNIST'
MNIST download completed!
That took 0.748 seconds
Accuracy: 0.94
Spent 3.131 seconds testing 100 images with k = 3
PS C:\Users\micha\.vscode\DSC30 PA5> ^C
PS C:\Users\micha\.vscode\DSC30 PA5>
PS C:\Users\micha\.vscode\DSC30 PA5> c:; cd 'c:\Users\micha\.vscode\DSC30 PA5'; & 'C:\Program Files\Java\jdk-17\bin\java.exe' '@C:\Users\micha\AppData\Local\Temp\cp_2owhds90zs1y6p9ijrzliib2p.argfile' 'MNIST'
MNIST download completed!
That took 0.736 seconds
Accuracy: 0.94
Spent 3.141 seconds testing 100 images with k = 3
PS C:\Users\micha\.vscode\DSC30 PA5> █

Case 2

NUM_TEST= 200
NUM_TRAIN=6000

```

17 public class MNIST {
18
19     public static final int NUM_TEST = 2_00; // can be up to 10k
20     // ^ recommended to change to 100 temporarily
21     public static final int NUM_TRAIN = 6_000; // can be up to 60k
22
23     public static final int K = 3;
24     public static final int IMG_DIM = 28;
25
26     private static final float[][] TRAIN_IMAGES = new float[NUM_TRAIN][IMG_DIM * IMG_DIM];
27     private static final short[] TRAIN_LABELS = new short[NUM_TRAIN];

```

PROBLEMS 21 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE

```

That took 0.748 seconds
Accuracy: 0.94
Spent 3.131 seconds testing 100 images with k = 3
○ PS C:\Users\micha\.vscode\DSC30 PA5> ^C
○ PS C:\Users\micha\.vscode\DSC30 PA5>
● PS C:\Users\micha\.vscode\DSC30 PA5> c:: cd 'c:\Users\micha\.vscode\DSC30 PA5'; & 'C:\Program Files\Java\jdk-17\bin\java.exe' '@C:\Users\micha\AppData\Local\Temp\cp_2owhds90zs1y6p9ijrzliib2p.argfile' 'MNIST'
MNIST download completed!
That took 0.736 seconds
Accuracy: 0.94
Spent 3.141 seconds testing 100 images with k = 3
○ PS C:\Users\micha\.vscode\DSC30 PA5> ^C
○ PS C:\Users\micha\.vscode\DSC30 PA5>
● PS C:\Users\micha\.vscode\DSC30 PA5> c::; cd 'c:\Users\micha\.vscode\DSC30 PA5'; & 'C:\Program Files\Java\jdk-17\bin\java.exe' '@C:\Users\micha\AppData\Local\Temp\cp_2owhds90zs1y6p9ijrzliib2p.argfile' 'MNIST'
MNIST download completed!
That took 0.836 seconds
Accuracy: 0.945
Spent 5.86 seconds testing 200 images with k = 3
○ PS C:\Users\micha\.vscode\DSC30 PA5> █

```

Case 3

NUM_TEST= 300

NUM_TRAIN=6000

```
17 public class MNIST {
18
19     public static final int NUM_TEST = 3_00; // can be up to 10k
20     // ^ recommended to change to 100 temporarily
21     public static final int NUM_TRAIN = 6_000; // can be up to 60k
22
23     public static final int K = 3;
24     public static final int IMG_DIM = 28;
25
26     private static final float[][] TRAIN_IMAGES = new float[NUM_TRAIN][IMG_DIM * IMG_DIM];
27     private static final short[] TRAIN_LABELS = new short[NUM_TRAIN];
```

PROBLEMS 21 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE

That took 0.736 seconds
Accuracy: 0.94
Spent 3.141 seconds testing 100 images with k = 3

- PS C:\Users\micha\.vscode\DSC30 PA5> ^C
- PS C:\Users\micha\.vscode\DSC30 PA5>
- PS C:\Users\micha\.vscode\DSC30 PA5> c::; cd 'c:\Users\micha\.vscode\DSC30 PA5'; & 'C:\Program Files\Java\jdk-17\bin\java.exe' '@C:\Users\micha\AppData\Local\Temp\cp_2owhds90zs1y6p9ijrzliib2p.argfile' 'MNIST'
MNIST download completed!
That took 0.836 seconds
Accuracy: 0.945
Spent 5.86 seconds testing 200 images with k = 3
- PS C:\Users\micha\.vscode\DSC30 PA5> ^C
- PS C:\Users\micha\.vscode\DSC30 PA5>
- PS C:\Users\micha\.vscode\DSC30 PA5> c::; cd 'c:\Users\micha\.vscode\DSC30 PA5'; & 'C:\Program Files\Java\jdk-17\bin\java.exe' '@C:\Users\micha\AppData\Local\Temp\cp_2owhds90zs1y6p9ijrzliib2p.argfile' 'MNIST'
MNIST download completed!
That took 0.723 seconds
Accuracy: 0.9266667
Spent 8.786 seconds testing 300 images with k = 3
- PS C:\Users\micha\.vscode\DSC30 PA5> █

Case 4

NUM_TEST= 500
NUM_TRAIN=6000

```
16
17 public class MNIST {
18
19     public static final int NUM_TEST = 5_00; // can be up to 10k
20     // ^ recommended to change to 100 temporarily
21     public static final int NUM_TRAIN = 6_000; // can be up to 60k
22
23     public static final int K = 3;
24     public static final int IMG_DIM = 28;
25
26     private static final float[][][] TRAIN_IMAGES = new float[NUM_TRAIN][IMG_DIM * IMG_DIM];
27     private static final short[][] TRAIN_LABELS = new short[NUM_TRAIN]:
```

PROBLEMS 21 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE

That took 0.836 seconds
Accuracy: 0.945
Spent 5.86 seconds testing 200 images with k = 3
PS C:\Users\micha\vscode\DSC30 PA5> ^C
PS C:\Users\micha\vscode\DSC30 PA5>
PS C:\Users\micha\vscode\DSC30 PA5> c:: cd 'c:\Users\micha\vscode\DSC30 PA5'; & 'C:\Program Files\Java\jdk-17\bin\java.exe' '@C:\Users\micha\AppData\Local\Temp\cp_2owhds90zs1y6p9ijrzliib2p.argfile' 'MNIST download completed!
That took 0.723 seconds
Accuracy: 0.9266667
Spent 8.786 seconds testing 300 images with k = 3
PS C:\Users\micha\vscode\DSC30 PA5> ^C
PS C:\Users\micha\vscode\DSC30 PA5>
PS C:\Users\micha\vscode\DSC30 PA5> c:: cd 'c:\Users\micha\vscode\DSC30 PA5'; & 'C:\Program Files\Java\jdk-17\bin\java.exe' '@C:\Users\micha\AppData\Local\Temp\cp_2owhds90zs1y6p9ijrzliib2p.argfile' 'MNIST download completed!
That took 0.946 seconds
Accuracy: 0.918
Spent 15.643 seconds testing 500 images with k = 3
PS C:\Users\micha\vscode\DSC30 PA5> █

Case 5

NUM_TEST= 1000
NUM_TRAIN=6000

```

17 public class MNIST {
18
19     public static final int NUM_TEST = 1_000;    // can be up to 10k
20     // ^ recommended to change to 100 temporarily
21     public static final int NUM_TRAIN = 6_000; // can be up to 60k
22
23     public static final int K = 3;
24     public static final int IMG_DIM = 28;
25
26     private static final float[][] TRAIN_IMAGES = new float[NUM_TRAIN][IMG_DIM * IMG_DIM];
27     private static final short[] TRAIN_LABELS = new short[NUM_TRAIN];

```

PROBLEMS 21 OUTPUT DEBUG CONSOLE TERMINAL PORTS SQL CONSOLE

```

That took 0.723 seconds
Accuracy: 0.9266667
Spent 8.786 seconds testing 300 images with k = 3
○ PS C:\Users\micha\.vscode\DSC30 PA5> ^C
PS C:\Users\micha\.vscode\DSC30 PA5>
○ PS C:\Users\micha\.vscode\DSC30 PA5> c:; cd 'c:\Users\micha\.vscode\DSC30 PA5'; & 'C:\Program Files\Java
● dk-17\bin\java.exe' '@C:\Users\micha\AppData\Local\Temp\cp_2owhds90zs1y6p9ijrzliib2p.argfile' 'MNIST'
MNIST download completed!
That took 0.946 seconds
Accuracy: 0.918
Spent 15.643 seconds testing 500 images with k = 3
○ PS C:\Users\micha\.vscode\DSC30 PA5> ^C
○ PS C:\Users\micha\.vscode\DSC30 PA5>
● PS C:\Users\micha\.vscode\DSC30 PA5> c:; cd 'c:\Users\micha\.vscode\DSC30 PA5'; & 'C:\Program Files\Java
dk-17\bin\java.exe' '@C:\Users\micha\AppData\Local\Temp\cp_2owhds90zs1y6p9ijrzliib2p.argfile' 'MNIST'
MNIST download completed!
That took 0.879 seconds
Accuracy: 0.913
Spent 34.153 seconds testing 1000 images with k = 3
○ PS C:\Users\micha\.vscode\DSC30 PA5>

```