

Transpose

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16



1	5	9	13
2	6	10	14
3	7	11	15
4	8	12	16

Fast Transpose - Step 1

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

1	2
5	6

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

- Copy the data on the buffer block

Fast Transpose - Step 2

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

1	5
2	6

0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0

- Transpose the block

Fast Transpose - Step 3

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

1	5
2	6

1	5	0	0
2	6	0	0
0	0	0	0
0	0	0	0

- Copy the transposed block from the buffer block to the destination matrix

Fast Transpose - Step 4

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

9	10
13	14

1	5	0	0
2	6	0	0
0	0	0	0
0	0	0	0

- Iterates over blocks

Fast Transpose - Step 5

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

9	13
10	14

1	5	0	0
2	6	0	0
0	0	0	0
0	0	0	0

- Iterates over blocks

Fast Transpose - Step 6

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

9	13
10	14

1	5	9	13
2	6	10	14
0	0	0	0
0	0	0	0

- Iterates over blocks