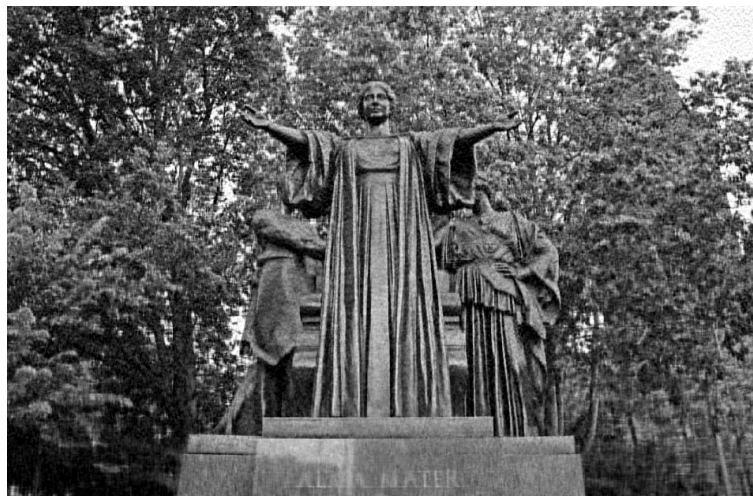


For example, take  $A_{100}$ :



$A_k$  is also easier to store:

- If  $k = 100$ , then to store the matrix  $A_{100}$  we need the numbers  $\sigma_1, \dots, \sigma_{100}$ , the vectors  $\mathbf{u}_1, \dots, \mathbf{u}_{100}$  and  $\mathbf{v}_1, \dots, \mathbf{v}_{100}$ .

- That's

$$100 + 100(625) + 100(960) = 158600$$

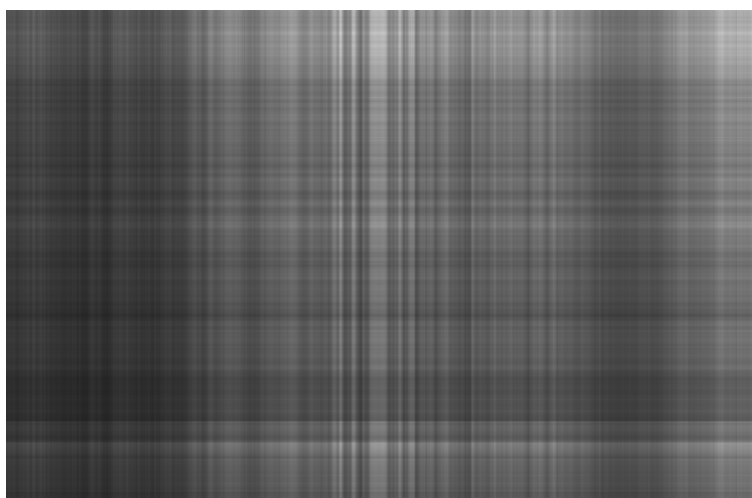
numbers

- Compare to the original matrix which had

$$625 \cdot 960 = 600000$$

numbers.

We reduced the file size by a factor of four!



$A_1$