Why column space?

Mitaxi Mehta: Lecture 10

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$$Ax \uparrow = x_1 C_1 \uparrow + x_2 C_2 \uparrow + ... x_n C_n \uparrow = b \uparrow$$

  (where C_i are column vectors of A and x_j are components of the vector $x \uparrow$) is solvable only if the vector $b \uparrow \in C(A)$.

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- If the top of the head of the person were at (x, y) after transformation it would be

$$\begin{pmatrix} 100 & 2 \\ 98 & 0 \end{pmatrix} \begin{pmatrix} x \\ y \end{pmatrix} = \begin{pmatrix} 100\,x + 2\,y \\ 98\,x \end{pmatrix}$$

This would not work.

- Dhruv Parikh: Use the matrix

$$\begin{pmatrix} .5 & 0 \\ 0 & 2 \end{pmatrix}$$

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- This would make the height double but also shift the location.

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- What about graylevels? use values between 0 and 1 to show different gralevels.
- How can one store colored images in a matrix ?, Read up before the next class.