Solving Sytems of linear equations:

$$x_1 - 2x_2 + 9x_3 + 13x_4 = 1$$
$$-5x_1 + x_2 + 6x_3 - 7x_4 = -3$$
$$4x_1 + 8x_2 - 4x_3 - 2x_4 = -2$$
$$8x_1 + 5x_2 - 7x_3 + x_4 = 5$$

$$A = \begin{bmatrix} 1 & -2 & 9 & 13 \\ -5 & 1 & 6 & -7 \\ 4 & 8 & -4 & -2 \\ 8 & 5 & -7 & 1 \end{bmatrix} \quad \vec{x} = \begin{bmatrix} x_1 \\ x_2 \\ x_3 \\ x_4 \end{bmatrix}$$

$$\vec{b} = \begin{bmatrix} 1 \\ -3 \\ 2 \\ 5 \end{bmatrix}$$

solve $A\vec{x} = \vec{b}$

A: coefficient matrix

$\vec{x}$, $\vec{b}$ vectors

Use scipy solver