

Matrix Theory - EE5609

Assignment 1 Lines and Planes

Problem Statement :

Solve the following pair of linear equations

$$(158 \ -378) x = -74$$

$$(-378 \ 152) x = -604$$

Solution : Here, solve by using inverse of matrix finding approach :

Consider matrix $A = \begin{bmatrix} 158 & -378 \\ -378 & 152 \end{bmatrix}$

Consider vector $b = \begin{bmatrix} -74 \\ -604 \end{bmatrix}$

Now, $Az = b$

So, $z = (\text{Inverse of matrix } A) * b$

Using this approach we can find out the solution :

$\begin{bmatrix} 2.01534475 & 1.03815998 \end{bmatrix}$

The implementation of above approach is done using python code using numpy library attached in below path :

https://github.com/priya6971/matrix_theory_EE5609/tree/master/school/tree/master/training/design/codes

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