

CHRIST (Deemed to be University)
DEPARTMENT OF MATHEMATICS
LA-I

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MAT-451 Mathematical Models Using Python Programming

1. Import iris.csv file and plot the species “Iris-versicolor” and “Iris-virginica”.
2. Create two 4x4 matrices and add them.
3. Write programs to demonstrate the dot and cross products.
4. Create a 3x2 matrix and print the sum of its elements using for loops.
5. Create a 2x3 matrix and fill it with random numbers.
6. Write a python program to multiply two matrices.
7. Using Matrix inversion, solve the following system of equation
$$\begin{aligned}4x_1 - 2x_2 + x_3 &= 11 \\ -2x_1 + 4x_2 - 2x_3 &= -16 \\ x_1 - 2x_2 + 4x_3 &= 17 .\end{aligned}$$