Лабараторна робота №5

Варіант 8

import numpy as np

from numpy import linalg

def gauss(a,b):

n = len(b)

for k in range(0,n-1):

for i in range(k+1,n):

if a[i,k] != 0.0:

a[i,k+1:n]= a[i,k+1:n]- a[i,k]/a[k,k]\*a[k,k+1:n]

b[i]= b[i]- a[i,k]/a[k,k]\*b[k]

for k in range(n-1,-1,-1):

b[k] =(b[k] - np.dot(a[k,k+1:n],b[k+1:n]))/a[k,k]

return b

print("Gauss Method:\n",gauss(np.matrix([[2,-1,1],[3,4,-2],[1,-3,1]]),np.matrix([[5],[-3],[4]])))

def ggauss():

a = np.matrix([[2,-1,1],[3,4,-2],[1,-3,1]])

b = np.matrix([[5],[-3],[4]])

c = np.linalg.inv(a)\*b

print("Method Jordana-Gaussa\n",c)

print('Solve\n', np.linalg.solve(a,b))

return c

ggauss()

