The A matrix is:

$$A = \begin{bmatrix} 17.4 & \{-32.1, -31.5, -30.3\} & \text{Unif}(23.4, 25.0) \\ -6.1 & \text{Unif}(27.0, 31.5) & \{50.2, 51.3\} \\ \text{Gauss}(5.3,1) & \{-18.2, -16.0\} & \text{Unif}(26.9, 30.2) \end{bmatrix}$$

The b vector is :

$$b = \begin{bmatrix} \text{Gauss}(-13.3, 1.2) \\ \{16.5, 17.3\} \\ 3.4 \end{bmatrix}$$

A screenshot input file for this is the text file shown below. It is attached as the file input3Vars in the repo.

```
3
custom,17.4
custom,-32.1,-31.5,-30.3
unif,23.4,25.0
custom,-6.1
unif,27.0,31.5
custom,50.2,51.3
gauss,5.3,1
custom,-18.2,-16.0
unif, 26.9,30.2
gauss,-13.3,1.2
custom, 16.5,17.3
custom, 3.4
```

On solving $Ax = b$, the result Signaloid Cloud Platform gives is

Gauss Triangulization

Value	Mean	Variance
0.7918	0.8028	0.0017
-0.6235	-0.6258	0.0027
-1.6275	-1.6358	0.0112

Gauss Jordan

Value	Mean	Variance
0.7918	0.8042	0.0464
-0.6235	-0.6291	0.0017
-1.6275	-1.6395	0.0112

Simulations in R show the means and variances of the solutions as

Mean	Variance
0.8048	0.014
-0.6315	0.005
-1.649	0.03

As expected the variance estimates are quite off, but the means are close enough to the true (based on 10000 simulations) results.

The histograms are given on the next page.

Gauss triangulation, Gauss Jordan and R simulation give the following distributions of the solution