

Assignment 3 - (10 points)

Your assignment for next Wednesday, the 24th, is to determine whether IDAK's new 3d sensor is properly calibrated. According to the engineers who designed the hardware, the sensor's theoretical error covariance matrix is:

$$\begin{bmatrix} 1 & 1 & 1 \\ 1 & 2 & 2 \\ 1 & 2 & 3 \end{bmatrix}$$

In theory, according to the engineers, the sensor should produce unbiased estimates with the above error covariance. To assess whether the hardware actually performs as predicted, the sensor was used to generate 100k measurements of a beacon with exactly known coordinates:

12.9 130.4 23.5

The results are contained in the binary file: `A3-MeasurementData.bin`

DELIVERABLE

Submit a short report (PDF form, as always) describing how you assessed the calibration of the sensor and your conclusions with supporting evidence.