

Computer Vision Assignment - 1

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Question - 8

Run the camera calibration tutorial. Compare the output with answers from Part A and Matlab calibration exercise.

Answer:

Matrices I got using theoretical calculation

1. Projection Matrix
2. Calibration Matrix
3. Rotation Matrix

Projection Matrix:

Finally, projection matrix:

$$\begin{bmatrix} -15331968 \\ -15331968 \\ -268224 \\ -20711808 \\ -20711808 \\ -364224 \\ -182112 \\ -20711808 \\ -20711808 \\ -364224 \\ -182112 \end{bmatrix}$$

-20515968
-20515968
-354624
-20711808
-20711808
-364224
-182112
-20711808
-20711808
-364224
-182112

Calibration Matrix:

$$K = \begin{bmatrix} 3.1021 & 3.1021 & 0.0467 \\ 0 & 0 & -0.004 \\ 0 & 0 & -0.006 \end{bmatrix}$$

	1	2	3	4	5	6	7	8	9
1	-15331968	-15331968	-268224	-20711808	-20711808	-364224	-20711808	-20711808	-364224
2									

Rotation Matrix:

$$R = \begin{bmatrix} -0.4742 & 0.8088 & -0.0143 \\ -0.5425 & -0.30800 & -0.6647 \\ -0.55613 & -0.4078 & 0.7009 \end{bmatrix}$$

	1	2	3	4	5	6	7	8	9
1	1								
2									