

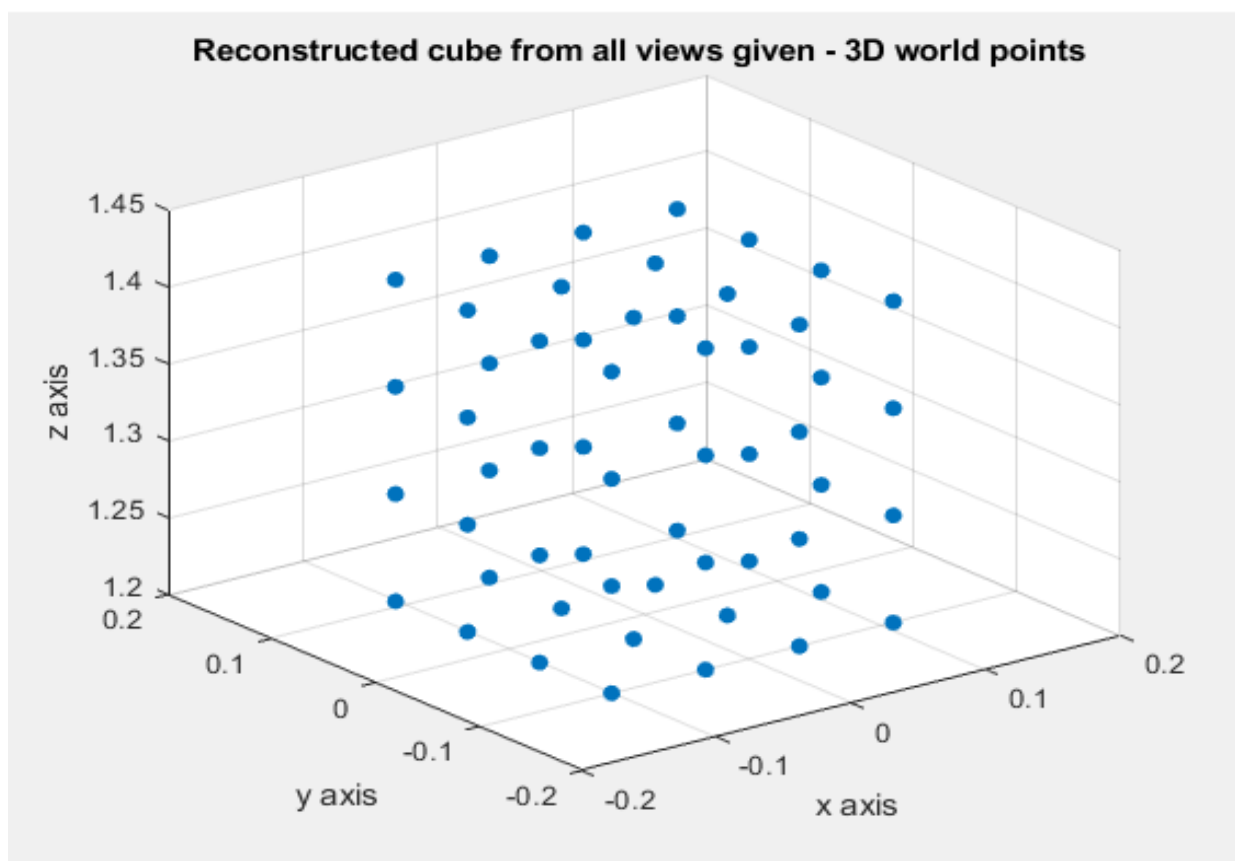
# MOBILE ROBOTICS

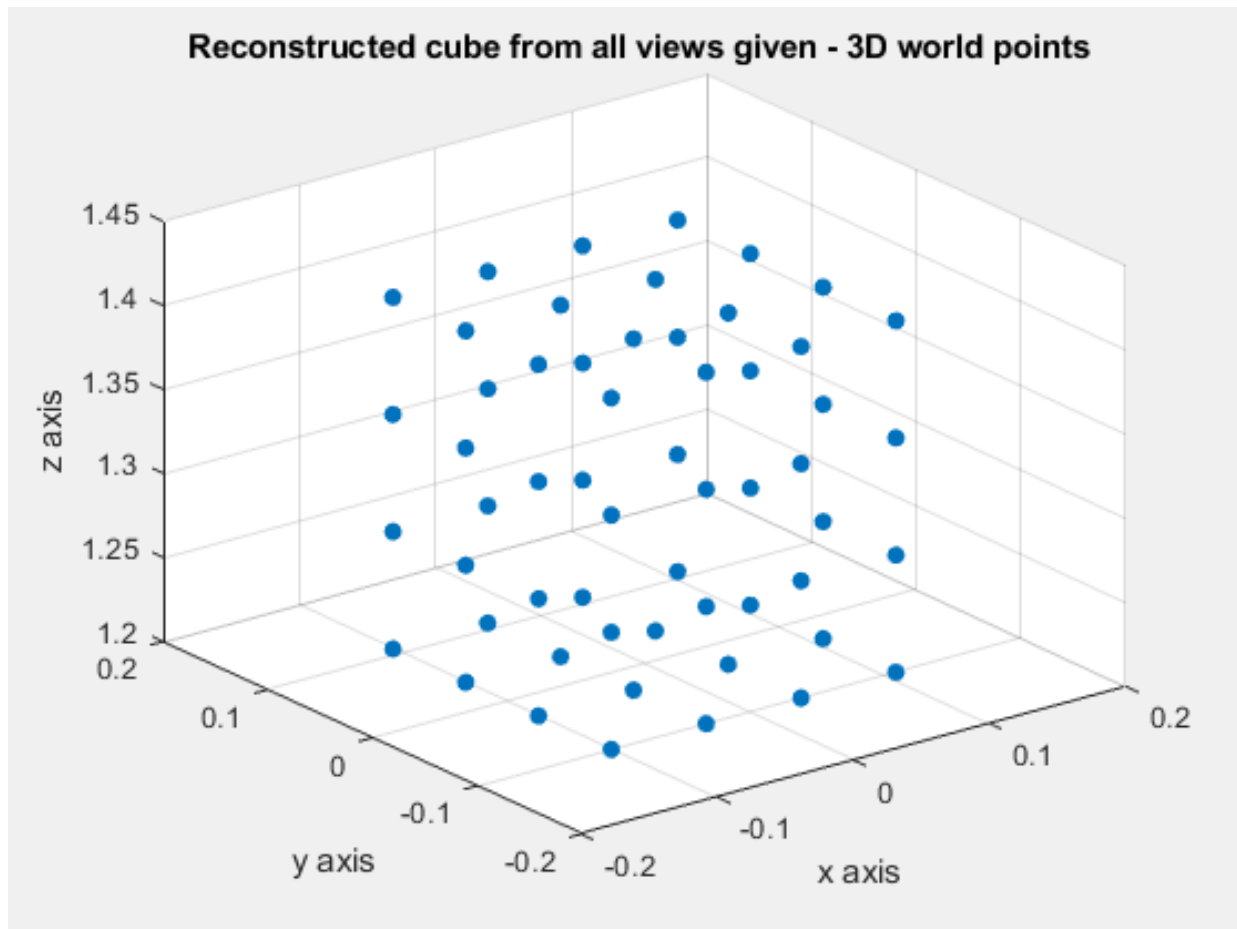
## ASSIGNMENT-4

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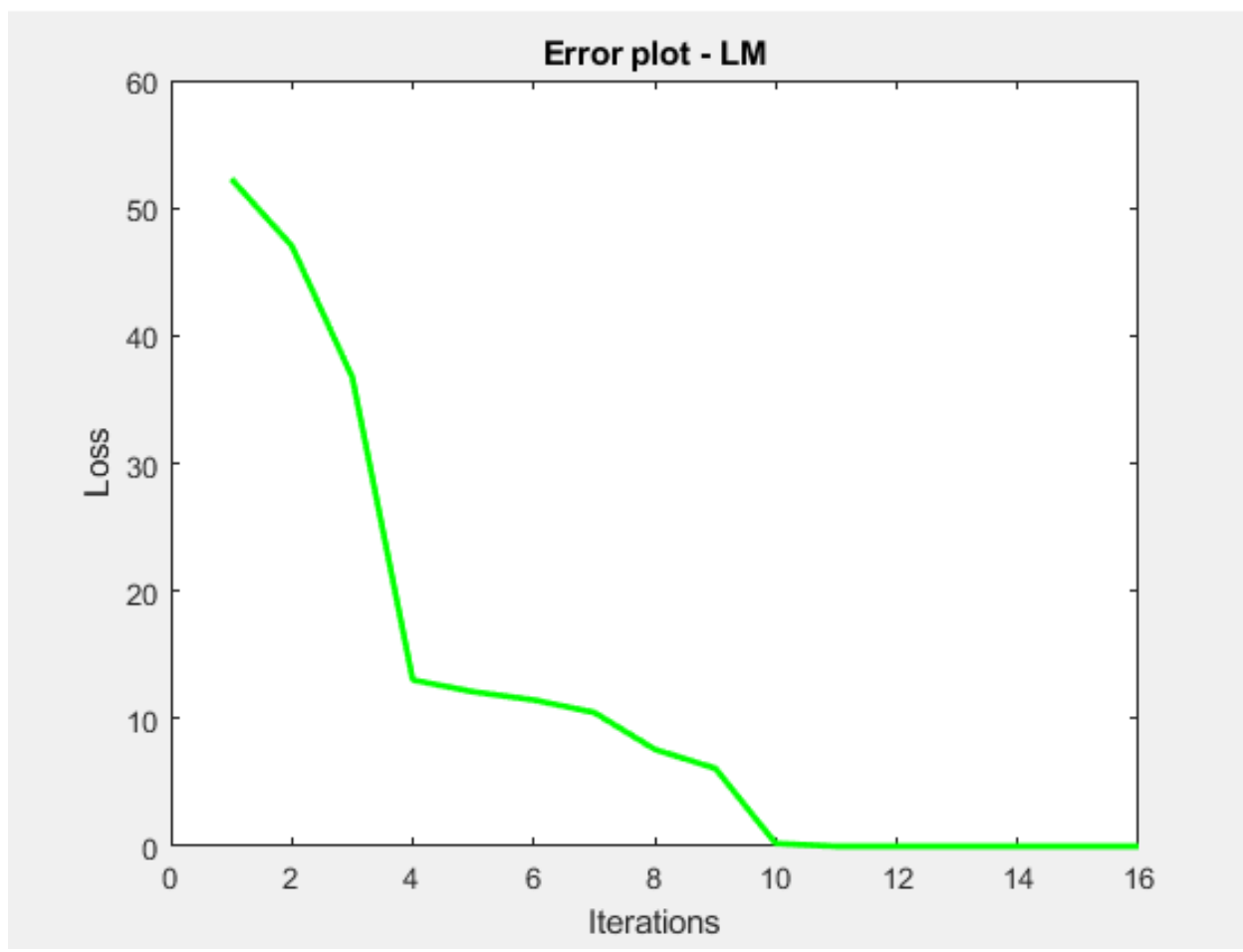
### Section -1

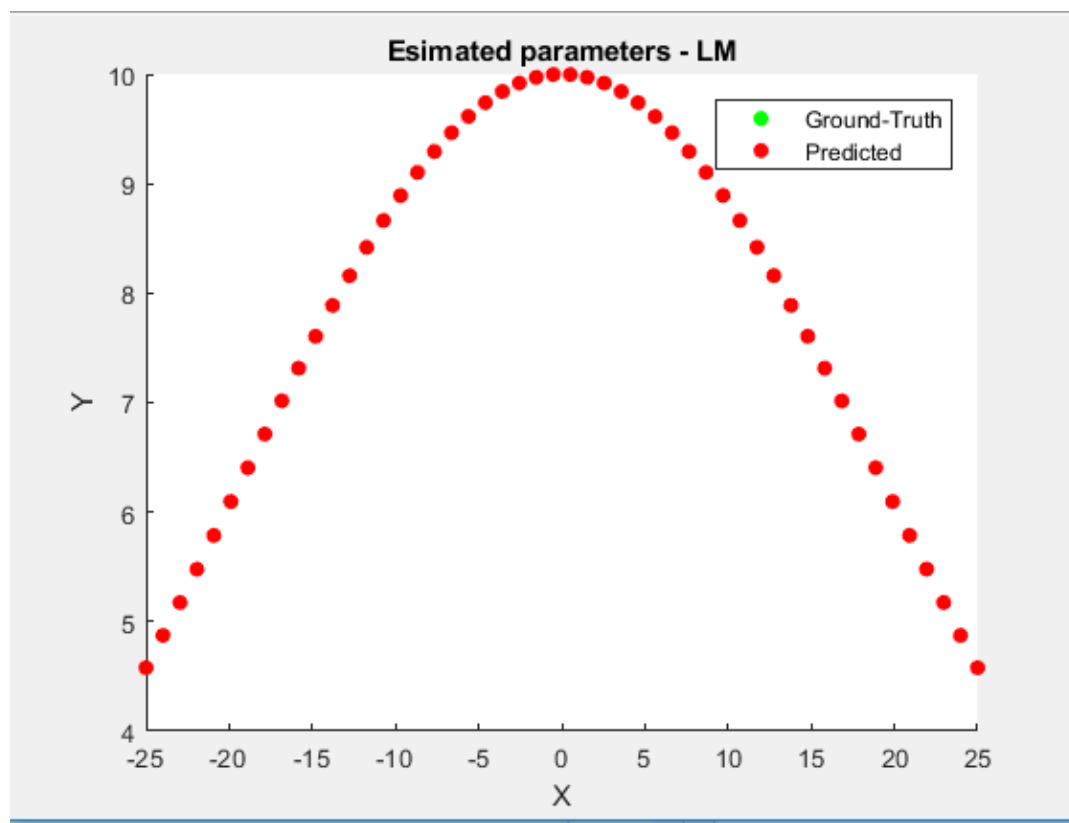




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- In this part, I appended two rows corresponding to the x and y coordinates of the image points, for 8 projection matrices known.
  - Thus, we have an equation of the form,
    - $AX = 0$ ; where , A is a  $(16*4)$  matrix.
    - X is a  $(4*1)$  matrix;
  - Using SVD ,I solved the above equations for all 56 points, obtained corresponding world points and plotted them.(Thus we obtain reconstructed cube)

## Section-2





```
Number of total iterations: 50
Number of successful steps: 15
Number of unsuccessful steps: 7
Estimated parameters of the Gaussian:
```

```
ans =
```

```
10.0000    -0.0000    20.0000|
```

```
True parameters of the Gaussian:
```

```
ans =
```

```
10      0      20
```

```
Difference in estimated and true parameters:
```

```
ans =
```

```
9.9598e-17
```

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