**Camera Calibration**

A method to find the internal and external parameters of a camera.

Primarily includes:

1. Creating linear camera model
2. Extracting intrinsic and extrinsic matrices

The device the pictures were clicked with had an ultra-wide-angle lens and therefore, a fisheye lens was chosen in the procedure.

**Terminologies**

1. **Radial Distortion:**

Distortion around the edges. Mainly of three kinds, zero, positive and negative.

We took 3 coefficients due to use of a wide-angle/ fisheye lens.

1. **Tangential Distortion:**

Caused when lens and image sensor of camera are not co-axial.

1. **Skew Distortion:**

Chosen to obtain best possible outcome.

1. **Reprojection error:**

Observed in few of the samples. Mainly attributed to poor angle of capture.

**References:**

1. <https://www.photoguard.co.uk/camera-lens-guide>

**Yet to explore:**

1. ‘Estimate Alignment’ option