CANNON ZOOM LENS 4x

Camera Calibration

opencv chessboard calibration

1. Parameters loaded from config file

2. Settings saved in an *Settings* Object

3. *Calibration_Instrinsic* class takes settings and performs calibration

4. *Calibration_Intrinsic* class saves distortion matrix in calib file

Perspective Projection

- Undistort image with calibration matrix

2 times:
- get shape of the arena using shape detection
- detect greatest rectangle in image
- detecting the length a and b
- sorting order of corners to achieve the right orientation

pixel scaling:
- dividing the distance of shorter side by 970mm

- save in full_calibration.yml file