Configuration :

The actual initial configuration of the end-effector

```
initial_config = np.array(
    [0.1, -0.2, 0, 0, 0, 0.2, -1.6, 0, 0, 0, 0, 0, 0])
```

The initial configuration of the end-effector in the reference trajectory:

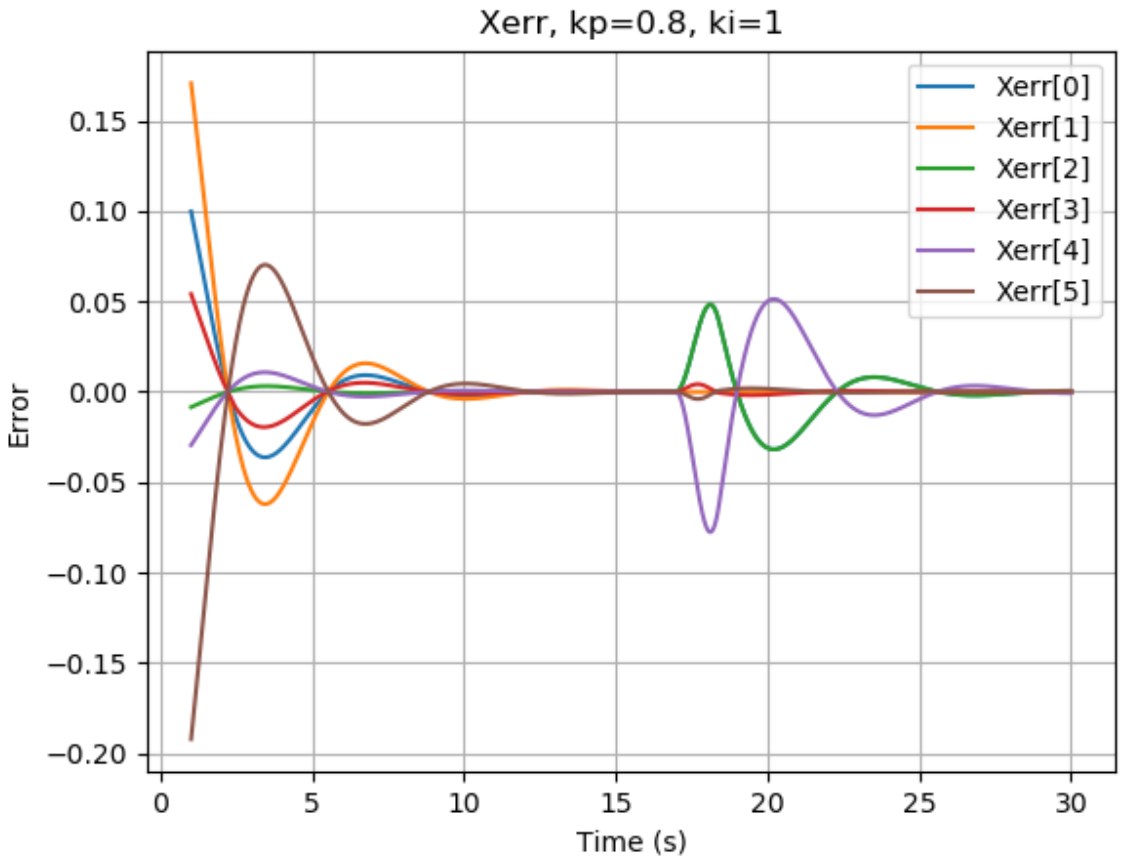
```
Tse_initial = np.array([[0, 0, 1,   0],
                        [0, 1, 0,   0],
                        [-1, 0, 0, 0.5],
                        [0, 0, 0,   1]])
```

The cube's initial configuration:

```
Tsc_initial = np.array([[1, 0, 0,     1],
                        [0, 1, 0,     0],
                        [0, 0, 1, 0.025],
                        [0, 0, 0,     1]])
```

The cube's desired final configuration:

```
Tsc_goal = np.array([[0, 1, 0,          0],
                     [-1, 0, 0,    -1],
                     [0, 0, 1, 0.025],
                     [0, 0, 0,     1]])
```



Controller Type Feedforward-Plus-PI controller
KP =0.8 Ki =1

From the plot we can observe that there is an overshoot at the beginning of the motion and when there is a bump in between .The plot converges with no steady-state error