**Orientation of an End-Effector and Rotational Matrix**

* A rigid body in three-dimensional space has six DoF: three rotational and three translational.
* The position and orientation of a rigid body can be described by attaching a frame to it.
* Cos -sin 0
* Sin cos 0
* 0 0 1

1 0 0

0 cos -sin

0 sin cos

Cos 0 sin

0 1 0

-Sin 0 cos