Two-Link Planar RP Arm With Offset (SHV 3-4)
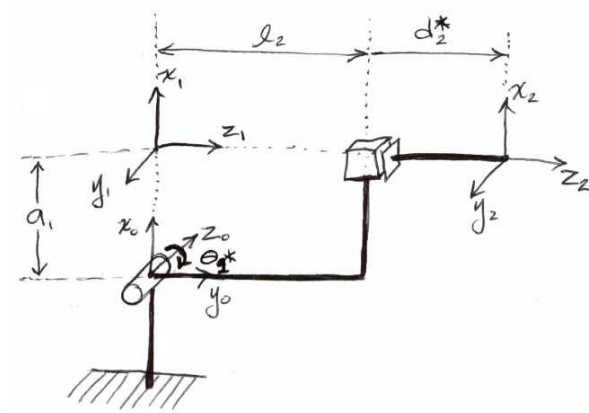
Link	a_i	α_i	d_i	θ_i
1	a_1	-90°	0	θ_1^*
2	0	0°	$l_2 + d_2^*$	0°

$$T_2^0 = \begin{bmatrix} c_1 & 0 & -s_1 & a_1 c_1 - (l_2 + d_2^*)\,s_1 \\ s_1 & 0 & c_1 & a_1 s_1 + (l_2 + d_2^*)\,c_1 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & 0 & 1 \end{bmatrix}$$

where $c_1 = \cos\theta_1^*$ and $s_1 = \sin\theta_1^*$

$$J_v = ?$$
$$J_\omega = ?$$

What are this robot's linear velocity singularities, if any?