$\theta := \frac{\pi}{3}$ $\qquad$ $c(\theta) \equiv \cos(\theta)$ $\qquad$ $s(\theta) \equiv \sin(\theta)$

$P_1 := \begin{pmatrix} 0 \\ 0 \\ 0 \end{pmatrix}$ $\quad$ $P_2 := \begin{pmatrix} 0 \\ 5 \\ 0 \end{pmatrix}$ $\quad$ $n := \frac{P_2 - P_1}{\left|P_2 - P_1\right|}$ $\quad$ $n = \begin{pmatrix} 0 \\ 1 \\ 0 \end{pmatrix}$ $\quad$ $\begin{pmatrix} n_x \\ n_y \\ n_z \end{pmatrix} := n$

$P := \begin{pmatrix} 2 & 5 & 3 & 2 \\ 3 & 6 & 8 & 3 \\ 0 & 0 & 0 & 0 \end{pmatrix}$ $\quad$ $i := 0 .. \mathrm{cols}(P) - 1$ $\quad$ $G := \mathrm{augment}(P_1, P_2)$

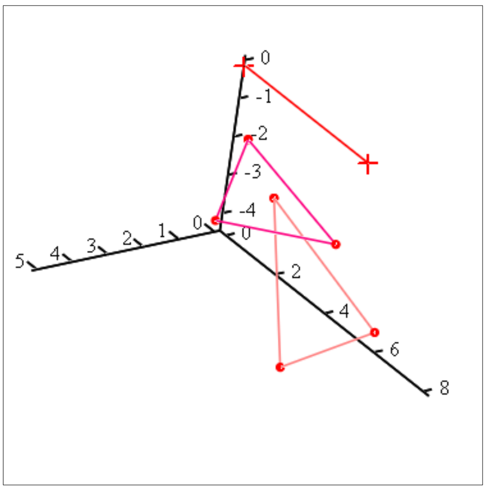
$G := G^T$

$$R(\theta) := \begin{bmatrix} n_x{}^2 \cdot (1 - c(\theta)) + c(\theta) & n_x \cdot n_y \cdot (1 - c(\theta)) - n_z \cdot s(\theta) & n_x \cdot n_z \cdot (1 - c(\theta)) + n_y \cdot s(\theta) \\ n_x \cdot n_y \cdot (1 - c(\theta)) + n_z \cdot s(\theta) & n_y{}^2 \cdot (1 - c(\theta)) + c(\theta) & n_y \cdot n_z \cdot (1 - c(\theta)) - n_x \cdot s(\theta) \\ n_x \cdot n_z \cdot (1 - c(\theta)) - n_y \cdot s(\theta) & n_y \cdot n_z \cdot (1 - c(\theta)) + n_x \cdot s(\theta) & n_z{}^2 \cdot (1 - c(\theta)) + c(\theta) \end{bmatrix}$$

$R\left(\frac{\pi}{3}\right) = \begin{pmatrix} 0.5 & 0 & 0.866 \\ 0 & 1 & 0 \\ -0.866 & 0 & 0.5 \end{pmatrix}$ $\quad$ $p(\theta) := R(\theta) \cdot P$ $\quad$ $p(\theta) = \begin{pmatrix} 1 & 2.5 & 1.5 & 1 \\ 3 & 6 & 8 & 3 \\ -1.732 & -4.33 & -2.598 & -1.732 \end{pmatrix}$

$X := \left[(P)^T\right]^{\langle 0 \rangle}$ $\quad$ $Y := \left[(P)^T\right]^{\langle 1 \rangle}$ $\quad$ $Z := \left[(P)^T\right]^{\langle 2 \rangle}$

$x := \left(p(\theta)^T\right)^{\langle 0 \rangle}$ $\quad$ $y := \left(p(\theta)^T\right)^{\langle 1 \rangle}$ $\quad$ $z := \left(p(\theta)^T\right)^{\langle 2 \rangle}$



$\left(G^{\langle 0 \rangle}, G^{\langle 1 \rangle}, G^{\langle 2 \rangle}\right), (X, Y, Z), (x, y, z)$

$m := 10 \quad j := 0..m \quad s_j := \frac{2\cdot\pi\cdot j}{m} \quad \theta_j := \frac{2\cdot\pi\cdot j}{m} \quad c(\theta) \equiv \cos(\theta) \quad s(\theta) \equiv \sin(\theta)$

$k := 0..2$

$P_1 := \begin{pmatrix} 0 \\ 0 \\ 0 \end{pmatrix} \quad P_2 := \begin{pmatrix} 0 \\ 5 \\ 0 \end{pmatrix} \quad n := \frac{P_2 - P_1}{\left|P_2 - P_1\right|} \quad n = \begin{pmatrix} 0 \\ 1 \\ 0 \end{pmatrix} \quad \begin{pmatrix} n_x \\ n_y \\ n_z \end{pmatrix} := n \quad G := \operatorname{augment}\left(P_1, P_2\right)$

$G := G^T$

$P := \begin{pmatrix} 2 & 5 & 3 & 2 \\ 3 & 6 & 8 & 3 \\ 0 & 0 & 0 & 0 \end{pmatrix} \quad i := 0..\operatorname{cols}(P) - 1$

$$R(\theta) := \begin{bmatrix} {n_x}^2\cdot(1 - c(\theta)) + c(\theta) & n_x\cdot n_y\cdot(1 - c(\theta)) - n_z\cdot s(\theta) & n_x\cdot n_z\cdot(1 - c(\theta)) + n_y\cdot s(\theta) \\ n_x\cdot n_y\cdot(1 - c(\theta)) + n_z\cdot s(\theta) & {n_y}^2\cdot(1 - c(\theta)) + c(\theta) & n_y\cdot n_z\cdot(1 - c(\theta)) - n_x\cdot s(\theta) \\ n_x\cdot n_z\cdot(1 - c(\theta)) - n_y\cdot s(\theta) & n_y\cdot n_z\cdot(1 - c(\theta)) + n_x\cdot s(\theta) & {n_z}^2\cdot(1 - c(\theta)) + c(\theta) \end{bmatrix}$$

$D := \left|\left(P^{\langle 0\rangle} - P_1\right) \times n\right| \quad D = 2$

$d_{k,i} := \left[\left(P^{\langle i\rangle} - P_1\right) \times n\right]_k \quad d = \begin{pmatrix} 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 \\ 2 & 5 & 3 & 2 \end{pmatrix}$

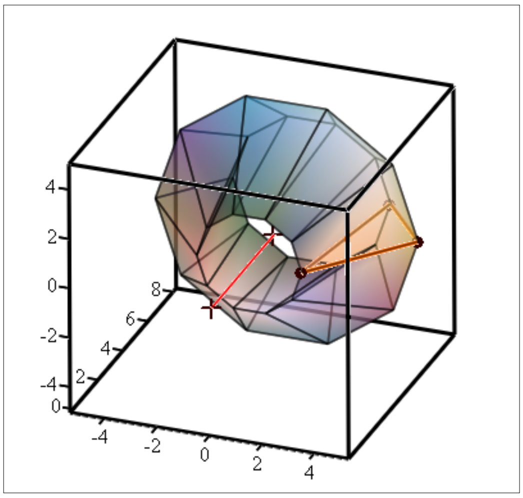
$T_k := \begin{pmatrix} 1 & 0 & d_{k,0} \\ 0 & 1 & d_{k,1} \\ 0 & 0 & d_{k,2} \end{pmatrix} \quad T1_k := \begin{pmatrix} 1 & 0 & -d_{k,0} \\ 0 & 1 & -d_{k,1} \\ 0 & 0 & -d_{k,2} \end{pmatrix} \quad T_1 = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 0 \end{pmatrix}$

$p(\theta) := R(\theta)\cdot P$

$R\left(\frac{\pi}{3}\right) = \begin{pmatrix} 0.5 & 0 & 0.866 \\ 0 & 1 & 0 \\ -0.866 & 0 & 0.5 \end{pmatrix}$

$$X := \left[(P)^{T}\right]^{\langle 0\rangle T} \qquad Y := \left[(P)^{T}\right]^{\langle 1\rangle T} \qquad Z := \left[(P)^{T}\right]^{\langle 2\rangle T}$$

$$x_{j,i} := \left[\left[\left(\left(p\left(\theta_j\right)\right)\right)^{T}\right]^{\langle 0\rangle T}\right]_{0,i} \qquad y_{j,i} := \left[\left[\left(\left(p\left(\theta_j\right)\right)\right)^{T}\right]^{\langle 1\rangle T}\right]_{0,i} \qquad z_{j,i} := \left[\left[\left(\left(p\left(\theta_j\right)\right)\right)^{T}\right]^{\langle 2\rangle T}\right]_{0,i}$$



$\left(G^{\langle 0\rangle}, G^{\langle 1\rangle}, G^{\langle 2\rangle}\right), (X, Y, Z), (x, y, z)$

$$\left[\left[\left(\left(p\left(\theta_j\right)\right)\right)^{T}\right]^{\langle 2\rangle T}\right]_{0,i} =$$

0
-1.176
-1.902
-1.902
-1.176
0
1.176
1.902
1.902
1.176
0
0
-2.939
-4.755
-4.755
...

$$p_{j,k} := T_k \cdot R\left(\theta_j\right) \cdot T1_k \cdot P^{\langle k\rangle}$$

$$x_{j,i} := \left(T_k \cdot R\left(\theta_j\right) \cdot T1_k \cdot P^{\langle k\rangle}\right)_{0,i}$$