RBOT 101: Assignment II Solutions

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Homework 1. Show that $\boldsymbol{x}^i$ are mutually orthogonal and normalized $i.e.$ orthonormal for the following N-dimensional Euclidean basis coordinate vectors

$$\boldsymbol{x}^1 = \begin{bmatrix} 1 \\ 0 \\ \vdots \\ 0 \end{bmatrix} \qquad \boldsymbol{x}^2 = \begin{bmatrix} 0 \\ 1 \\ \vdots \\ 0 \end{bmatrix} \qquad \boldsymbol{x}^N = \begin{bmatrix} 0 \\ 0 \\ \vdots \\ 1 \end{bmatrix} \tag{1}$$

REFERENCES

[1] G. Gogu, "Maximally regular t3-type translational parallel robots," *Structural Synthesis of Parallel Robots: Part 2: Translational Topologies with Two and Three Degrees of Freedom*, pp. 687–748, 2009.