Definition: Linear Dependence

We say the vectors $\vec{v}_1, \vec{v}_2, \ldots, \vec{v}_{n-1}, \vec{v}_n$ *are linearly dependent if there is a non-trivial solution to*

$$\alpha_1\vec{v}_1 + \alpha_2\vec{v}_2 + \cdots + \alpha_{n-1}\vec{v}_{n-1} + \alpha_n\vec{v}_n = \vec{0}$$

That is, not all coefficients are zero.