MATH 425 Lecture 7

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2/17/2022

Refresher on linear independence

Setting a matrix equal to x,y,z yields the plane or three dimensional space spanned by the vectors of that matrix.

Linear independence and dependence

A set of vectors is regarded to be linearly depedent if there exists a solution to the equation **Ax=0** that is not the trivial solution.

$$\text{A is linearly dependent} \iff \exists x | Ax = 0, x \neq 0$$

This is to say that there exists some weights for the columns of A such that the sum of the weighted vectors is equal to zero.