#flo #inclass

1 | best fit lines review

1.0.1 | general form:

$$\begin{bmatrix} x_1 & 1 \\ x_2 & 1 \end{bmatrix} * \begin{bmatrix} m \\ b \end{bmatrix} = \begin{bmatrix} y_1 \\ y_2 \end{bmatrix}$$
$$m \cdot x_1 + b = y_1 \ m \cdot x_2 + b = y_2$$

can only find lines if they are not colinear

can use determinant to check if lines are colinear parrel or equal if it's $\boldsymbol{0}$

solve for slopes, simplify, and you get 0 = ad - bc damn that's cool!

1.0.2 | can't solve when ad=bc, or -b/a = -d/c

for example, \$
$$\begin{bmatrix} 1 & 2 \\ 1 & 2 \end{bmatrix}$$
 \$ because $1*2=1*2$

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$$\begin{bmatrix} 2 & 4 \\ 1 & 2 \end{bmatrix}$$
 \$ because $2*4 = 1*4$

two axis in 3 space

we listerally have grapher... bro #review play with grapher it's cool parrell lines which start at 0 are colinear