The Columns of a Matrix Are the Images of Unit Vectors
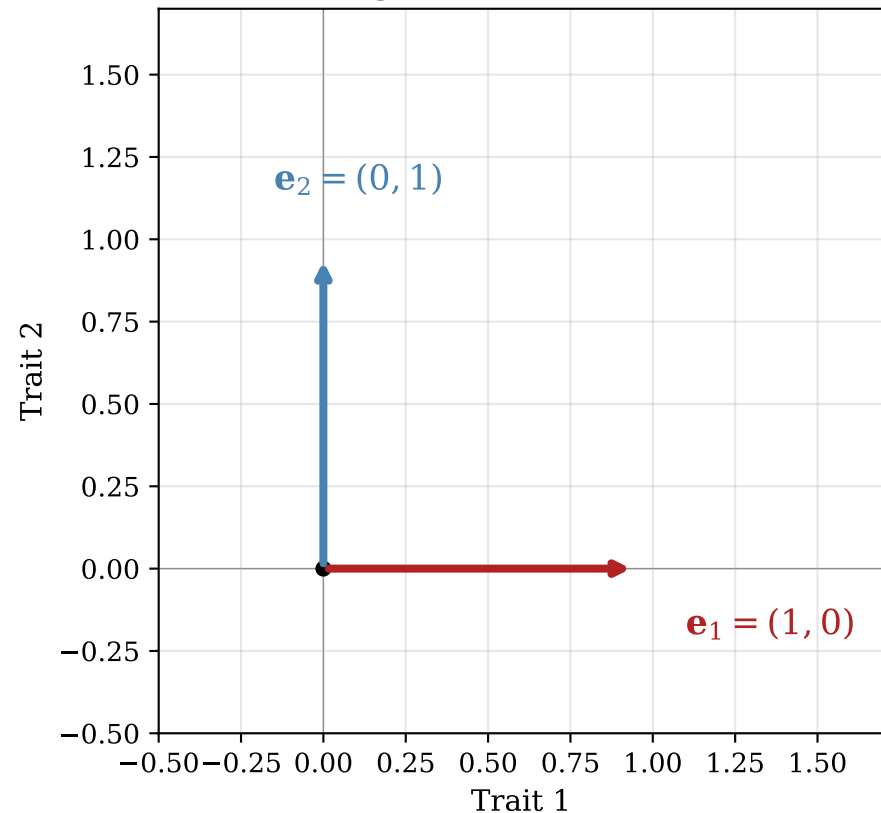## Column 1 (red) = where e_1 lands. Column 2 (blue) = where e_2 lands.

Original: Unit Vectors

$e_2 = (0, 1)$

$e_1 = (1, 0)$

A

$$\begin{bmatrix} 2 & 1 \\ 1 & 3 \end{bmatrix}$$

multiply

col 1   col 2

Transformed: Columns of A

$Ae_2 = (1, 3)$

$Ae_1 = (2, 1)$