

# Machine learning - linear algebra review



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matrix definition rectangular array of numbers dimension of matrix number of rows times number of columns ONMACHINE LEARNING -LINEAR ALGEBRA REVIEW SPECIFICALLY FOR YOU FOR ONLY \$13.90/PAGE Order Now matrix numbers  $x$  by  $y$  is which rows by columns Funny R symbol All matrices of specific dimension Matrix elements entries inside of matrix vector defined as An  $n \times 1$  matrix 4 dimensional vector means  $4 \times 1$  matrix (vector)  $y_{sub(i)}$  of vector  $i$ th element indexed vector types 0 or 1 like arrays in programming languages upper case letters in linear algebra Matrix lower case letters in linear algebra vectors when can you add 2 matrices when they have the same dimensions scalar in linear algebra single number divide by a scalar type  $1/x$  and multiply multiply  $a \times b$  against  $c \times d$ , size of result  $a \times d$  if  $a \times b$  multiply  $c \times d$ , what must  $b$  and  $c$  be  $b$  must equal  $c$  transpose  $\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix} \begin{bmatrix} 1 & 3 \\ 2 & 4 \end{bmatrix}$  identity matrix with diagonal 1 inverse matrix to make identity