Linear Algebra Symbols

Symbol	Symbol Name	Meaning / definition	Example
$\cdot$	Dot	scalar product	$a \cdot b$
$\times$	Cross	vector product	$a \times b$
$A \otimes B$	tensor product	tensor product of A and B	$A \otimes B$
$\langle x, y \rangle$	inner product		
$[\ ]$	brackets	matrix of numbers	
$(\ )$	parentheses	matrix of numbers	
$\lvert A \rvert$	determinant	determinant of matrix A	
$\det(A)$	determinant	determinant of matrix A	
$\lVert x \rVert$	double vertical bars	norm	
A^{T}	transpose	matrix transpose	$(A^{\mathrm{T}})_{ij} = (A)_{ji}$
$A^{\dagger}$	Hermitian matrix	matrix conjugate transpose	$(A^{\dagger})_{ij} = (A)_{ji}$
A^{*}	Hermitian matrix	matrix conjugate transpose	$(A^{*})_{ij} = (A)_{ji}$
A^{-1}	inverse matrix	$A\,A^{-1} = I$	
$\operatorname{rank}(A)$	matrix rank	rank of matrix A	$\operatorname{rank}(A) = 3$
$\dim(U)$	dimension	dimension of matrix A	$\dim(U) = 3$