

Multiplicación entre Matrices

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Multiplicación entre Matrices

$$A_{f \times 1} \times B_{1 \times c} = C_{f \times c}$$

$$\begin{bmatrix} f_1 \\ f_2 \end{bmatrix} \times \begin{bmatrix} c_1 & c_2 \end{bmatrix} = \begin{bmatrix} f_1 c_1 & f_1 c_2 \\ f_2 c_1 & f_2 c_2 \end{bmatrix}$$

Multiplicación entre Matrices

$$A_{1 \times 2} \times B_{2 \times 1} = C_{1 \times 1}$$

$$[a_1 \quad a_2] \times \begin{bmatrix} b_1 \\ b_2 \end{bmatrix} = [a_1 b_1 + a_2 b_2]$$

$$[a_1 \quad a_2] \times \begin{bmatrix} b_1 \\ b_2 \end{bmatrix} = [c_{11}]$$

$$A_{1 \times 3} \times B_{3 \times 1} = C_{1 \times 1}$$

$$[a_1 \quad a_2 \quad a_3] \times \begin{bmatrix} b_1 \\ b_2 \\ b_3 \end{bmatrix} = [a_1 b_1 + a_2 b_2 + a_3 b_3]$$

$$[a_1 \quad a_2 \quad a_3] \times \begin{bmatrix} b_1 \\ b_2 \\ b_3 \end{bmatrix} = [c_{11}]$$

Multiplicación entre Matrices

$$A_{2 \times 1} \times B_{1 \times 2} = C_{2 \times 2}$$
$$\begin{bmatrix} a_1 \\ a_2 \end{bmatrix} \times \begin{bmatrix} b_1 & b_2 \end{bmatrix} = \begin{bmatrix} a_1 b_1 & a_1 b_2 \\ a_2 b_1 & a_2 b_2 \end{bmatrix}$$

$$\begin{bmatrix} a_1 \\ a_2 \end{bmatrix} \times \begin{bmatrix} b_1 & b_2 \end{bmatrix} = \begin{bmatrix} c_{11} & c_{12} \\ c_{21} & c_{22} \end{bmatrix}$$

$$A_{3 \times 1} \times B_{1 \times 3} = C_{3 \times 3}$$
$$\begin{bmatrix} a_1 \\ a_2 \\ a_3 \end{bmatrix} \times \begin{bmatrix} b_1 & b_2 & b_3 \end{bmatrix} = \begin{bmatrix} a_1 b_1 & a_1 b_2 & a_1 b_3 \\ a_2 b_1 & a_2 b_2 & a_2 b_3 \\ a_3 b_1 & a_3 b_2 & a_3 b_3 \end{bmatrix}$$

$$\begin{bmatrix} a_1 \\ a_2 \\ a_3 \end{bmatrix} \times \begin{bmatrix} b_1 & b_2 & b_3 \end{bmatrix} = \begin{bmatrix} c_{11} & c_{12} & c_{13} \\ c_{21} & c_{22} & c_{23} \\ c_{31} & c_{32} & c_{33} \end{bmatrix}$$

Multiplicación entre Matrices

$$A_{2 \times 2} \times B_{2 \times 1} = C_{2 \times 1}$$
$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \times \begin{bmatrix} b_1 \\ b_2 \end{bmatrix} = \begin{bmatrix} a_{11}b_1 + a_{12}b_2 \\ a_{21}b_1 + a_{22}b_2 \end{bmatrix}$$

$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \times \begin{bmatrix} b_1 \\ b_2 \end{bmatrix} = \begin{bmatrix} c_{11} \\ c_{21} \end{bmatrix}$$

$$A_{1 \times 2} \times B_{2 \times 2} = C_{1 \times 2}$$
$$\begin{bmatrix} a_1 & a_2 \end{bmatrix} \times \begin{bmatrix} b_{11} & b_{12} \\ b_{21} & b_{22} \end{bmatrix} = \begin{bmatrix} a_1b_{11} + a_2b_{21} & a_1b_{12} + a_2b_{22} \end{bmatrix}$$

$$\begin{bmatrix} a_1 & a_2 \end{bmatrix} \times \begin{bmatrix} b_{11} & b_{12} \\ b_{21} & b_{22} \end{bmatrix} = \begin{bmatrix} c_{11} & c_{12} \end{bmatrix}$$

Multiplicación entre Matrices

$$A_{2 \times 1} \times B_{1 \times 3} = C_{2 \times 3}$$
$$\begin{bmatrix} a_1 \\ a_2 \end{bmatrix} \times [b_1 \quad b_2 \quad b_3] = \begin{bmatrix} a_1 b_1 & a_1 b_2 & a_1 b_3 \\ a_2 b_1 & a_2 b_2 & a_2 b_3 \end{bmatrix}$$

$$\begin{bmatrix} a_1 \\ a_2 \end{bmatrix} \times [b_1 \quad b_2 \quad b_3] = \begin{bmatrix} c_{11} & c_{12} & c_{13} \\ c_{21} & c_{22} & c_{23} \end{bmatrix}$$

Multiplicación entre Matrices

$$A_{3 \times 1} \times B_{1 \times 2} = C_{3 \times 2}$$
$$\begin{bmatrix} a_1 \\ a_2 \\ a_3 \end{bmatrix} \times \begin{bmatrix} b_1 & b_2 \end{bmatrix} = \begin{bmatrix} a_1 b_1 & a_1 b_2 \\ a_2 b_1 & a_2 b_2 \\ a_3 b_1 & a_3 b_2 \end{bmatrix}$$

$$\begin{bmatrix} a_1 \\ a_2 \\ a_3 \end{bmatrix} \times \begin{bmatrix} b_1 & b_2 \end{bmatrix} = \begin{bmatrix} c_{11} & c_{12} \\ c_{21} & c_{22} \\ c_{31} & c_{32} \end{bmatrix}$$

Multiplicación entre Matrices

$$A_{3 \times 2} \times B_{2 \times 1} = C_{3 \times 1}$$
$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \\ a_{31} & a_{32} \end{bmatrix} \times \begin{bmatrix} b_1 \\ b_2 \end{bmatrix} = \begin{bmatrix} a_{11}b_1 + a_{12}b_2 \\ a_{21}b_1 + a_{22}b_2 \\ a_{31}b_1 + a_{32}b_2 \end{bmatrix}$$

$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \\ a_{31} & a_{32} \end{bmatrix} \times \begin{bmatrix} b_1 \\ b_2 \end{bmatrix} = \begin{bmatrix} c_{11} \\ c_{21} \\ c_{31} \end{bmatrix}$$

Multiplicación entre Matrices

$$A_{1 \times 2} \times B_{2 \times 3} = C_{1 \times 3}$$
$$[a_1 \quad a_2] \times \begin{bmatrix} b_{11} & b_{12} & b_{13} \\ b_{21} & b_{22} & b_{23} \end{bmatrix} = [a_1 b_{11} + a_2 b_{21} \quad a_1 b_{12} + a_2 b_{22} \quad a_1 b_{13} + a_2 b_{23}]$$

$$[a_1 \quad a_2] \times \begin{bmatrix} b_{11} & b_{12} & b_{13} \\ b_{21} & b_{22} & b_{23} \end{bmatrix} = [c_{11} \quad c_{12} \quad c_{13}]$$

Multiplicación entre Matrices

$$A_{2 \times 2} \times B_{2 \times 2} = C_{2 \times 2}$$
$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \times \begin{bmatrix} b_{11} & b_{12} \\ b_{21} & b_{22} \end{bmatrix} = \begin{bmatrix} a_{11}b_{11} + a_{12}b_{21} & a_{11}b_{12} + a_{12}b_{22} \\ a_{21}b_{11} + a_{22}b_{21} & a_{21}b_{12} + a_{22}b_{22} \end{bmatrix}$$

$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \times \begin{bmatrix} b_{11} & b_{12} \\ b_{21} & b_{22} \end{bmatrix} = \begin{bmatrix} c_{11} & c_{12} \\ c_{21} & c_{22} \end{bmatrix}$$

Multiplicación entre Matrices

$$A_{2 \times 2} \times B_{2 \times 3} = C_{2 \times 3}$$
$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \times \begin{bmatrix} b_{11} & b_{12} & b_{13} \\ b_{21} & b_{22} & b_{23} \end{bmatrix} = \begin{bmatrix} a_{11}b_{11} + a_{12}b_{21} & a_{11}b_{12} + a_{12}b_{22} & a_{11}b_{13} + a_{12}b_{23} \\ a_{21}b_{11} + a_{22}b_{21} & a_{21}b_{12} + a_{22}b_{22} & a_{21}b_{13} + a_{22}b_{23} \end{bmatrix}$$

$$\begin{bmatrix} a_{11} & a_{12} \\ a_{21} & a_{22} \end{bmatrix} \times \begin{bmatrix} b_{11} & b_{12} & b_{13} \\ b_{21} & b_{22} & b_{23} \end{bmatrix} = \begin{bmatrix} c_{11} & c_{12} & c_{13} \\ c_{21} & c_{22} & c_{23} \end{bmatrix}$$

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