11. Matrix Multiplication

Homework0 due Feb 8, 2023 08:59 -03 Completed

Matrix Multiplication

6/6 points (graded)

Let $\mathbf{A} = \begin{pmatrix} 1 & -1 & 2 \\ 0 & 3 & -4 \end{pmatrix}$ and let $\mathbf{B} = \begin{pmatrix} -1 & 0 & 0 \\ 2 & 0 & 1 \\ 0 & 1 & 3 \end{pmatrix}$. The dimensions of the pro

2 ✔ rows × 3

More generally, let $\mathbf{A}$ be an $m \times n$ matrix and $\mathbf{B}$ be an $n \times k$ matrix. What is the size

m ✔ rows × k

In addition, if $\mathbf{C}$ is a $k \times j$ matrix, what is the size of $\mathbf{ABC}$?

m ✔ rows × j

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Vector Inner product

1/1 point (graded)

Suppose $\mathbf{u} = \begin{pmatrix} 1 \\ 3 \end{pmatrix}$ and $\mathbf{v} = \begin{pmatrix} -1 \\ 1 \end{pmatrix}$. The product $\mathbf{u}^T\mathbf{v}$ evaluates the **inner product**

product) of $\mathbf{u}$ and $\mathbf{v}$, which evaluates to

$\mathbf{u}^T\mathbf{v} =$ 2 ✔

The inner product of $\mathbf{u}$ and $\mathbf{v}$ is sometimes written as $\langle \mathbf{u}, \mathbf{v} \rangle$.

Submit You have used 1 of 3 attempts

Vector Outer product