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11. Matrix Multiplication

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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 product

rows \times

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

rows \times

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

rows \times

You have used 1 of 3 attempts

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** (or **dot product**) of \mathbf{u} and \mathbf{v} , which evaluates to

 $\mathbf{u}^T \mathbf{v} =$ 

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

You have used 1 of 3 attempts

Vector Outer product

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