Computing LT$(A \cdot B^{\mathsf{T}}) \cdot C$

- $A_{i*}, B_{i*}, C_{i*} \in \mathbb{R}^d$ be i-th rows of the respective matrices

- i-th row of matrix $\mathrm{LT}(A \cdot B^{\mathsf{T}}) \cdot C =$

- Compute the cumulative sums $B_{1*}C_{1*}^{\mathsf{T}}$, $B_{1*}C_{1*}^{\mathsf{T}} + B_{2*}C_{2*}^{\mathsf{T}}$, ...

- Multiply each cumulative sum with the corresponding $(A_{i*})^{\mathsf{T}}$

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$$(A_{i*})^{\mathsf{T}} \left(\sum_{j \leq i} B_{j*} C_{j*}^{\mathsf{T}} \right)$$

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Computing $\mathbf{LT}(A \cdot B^{\mathsf{T}}) \cdot C$