

Example

$$A = \begin{pmatrix} 5 & 1 & 2 \\ 1 & 3 & 7 \\ 2 & 7 & 8 \end{pmatrix}$$

$$B = \begin{pmatrix} 3 & 4 \\ 7 & 3 \\ 8 & 1 \end{pmatrix}$$

$$C_{3 \times 2}$$

$$C = \begin{matrix} & C_{11} & \\ A_{11}B_{11} + A_{12}B_{21} + A_{13}B_{31} & \\ & C_{21} & \\ A_{21}B_{11} + A_{22}B_{21} + A_{23}B_{31} & \\ & C_{31} & \\ A_{31}B_{11} + A_{32}B_{21} + A_{33}B_{31} & \end{matrix}$$

$$\begin{matrix} & C_{12} & \\ A_{11}B_{12} + A_{12}B_{22} + A_{13}B_{32} & \\ & C_{22} & \\ A_{21}B_{12} + A_{22}B_{22} + A_{23}B_{32} & \\ & & \\ A_{31}B_{12} + A_{32}B_{22} + A_{33}B_{32} & \end{matrix}$$

$$C = \begin{matrix} 5 \times 3 + 1 \times 7 + 2 \times 8 & 5 \times 4 + 1 \times 3 + 2 \times 1 \\ 1 \times 3 + 3 \times 7 + 7 \times 8 & 1 \times 4 + 3 \times 3 + 7 \times 1 \\ 2 \times 3 + 7 \times 7 + 8 \times 8 & 2 \times 4 + 7 \times 3 + 8 \times 1 \end{matrix}$$

$$C = \begin{pmatrix} 38 & 25 \\ 80 & 20 \\ 119 & 37 \end{pmatrix}$$

[Signature]