

Step	<b>Algorithm:</b> $[C] := \text{SYRK\_AC\_BLK\_VAR2}(A, C)$
1a	$\{C = \widehat{C}$ <span style="float: right;"><math>\}</math></span>
4	$A \rightarrow \begin{pmatrix} A_T \\ A_B \end{pmatrix}$ <b>where</b> $A_T$ has 0 rows
2	$\{C = A_T^T A_T + \widehat{C}$ <span style="float: right;"><math>\}</math></span>
3	<b>while</b> $m(A_T) < m(A)$ <b>do</b>
2,3	$\left\{ \begin{array}{l} C = A_T^T A_T + \widehat{C} \wedge m(A_T) < m(A) \end{array} \right\}$
5a	<b>Determine block size <math>b</math></b> $\begin{pmatrix} A_T \\ A_B \end{pmatrix} \rightarrow \begin{pmatrix} A_0 \\ A_1 \\ A_2 \end{pmatrix}$ <b>where</b> $A_1$ has $b$ rows
6	$\left\{ \begin{array}{l} C = A_0^T A_0 + \widehat{C} \end{array} \right\}$
8	$C = A_1^T A_1 + C$
7	$\left\{ \begin{array}{l} C = A_0^T A_0 + A_1^T A_1 + \widehat{C} \end{array} \right\}$
5b	$\begin{pmatrix} A_T \\ A_B \end{pmatrix} \leftarrow \begin{pmatrix} A_0 \\ A_1 \\ A_2 \end{pmatrix}$
2	$\left\{ \begin{array}{l} C = A_T^T A_T + \widehat{C} \end{array} \right\}$
	<b>endwhile</b>
2,3	$\{C = A_T^T A_T + \widehat{C} \wedge \neg(m(A_T) < m(A))$ <span style="float: right;"><math>\}</math></span>
1b	$\{[C] = \text{syrk\_ac}(A, \widehat{C})$ <span style="float: right;"><math>\}</math></span>

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1a	{
4	where
2	{
3	while do
2,3	{ $\wedge$ }
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6	{
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2	{
	endwhile
2,3	{ $\wedge \neg($ ) }
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Step	Algorithm: $[C] := \text{SYRK\_AC\_BLK\_VAR2}(A, C)$
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3	while do
2,3	$\{C = A_T^T A_T + \widehat{C} \wedge$ <span style="float: right;"><math>\}</math></span>
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2	$\{C = A_T^T A_T + \widehat{C}$ <span style="float: right;"><math>\}</math></span>
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1a	$\{C = \widehat{C}$ <span style="float: right;">}</span>
4	<div style="text-align: center;">where</div>
2	$\{C = A_T^T A_T + \widehat{C}$ <span style="float: right;">}</span>
3	while $m(A_T) < m(A)$ do
2,3	$\left\{ \begin{array}{l} C = A_T^T A_T + \widehat{C} \wedge m(A_T) < m(A) \end{array} \right\}$
5a	<div style="text-align: center;">Determine block size <math>b</math></div> <div style="text-align: center;">where</div>
6	$\{$ <span style="float: right;">}</span>
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5b	
2	$\left\{ \begin{array}{l} C = A_T^T A_T + \widehat{C} \end{array} \right\}$
	endwhile
2,3	$\{C = A_T^T A_T + \widehat{C} \wedge \neg(m(A_T) < m(A))$ <span style="float: right;">}</span>
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	$C = A_1^T A_1 + C$
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**Algorithm:**  $[C] := \text{SYRK\_AC\_BLK\_VAR2}(A, C)$

$$A \rightarrow \begin{pmatrix} A_T \\ A_B \end{pmatrix}$$

**where**  $A_T$  has 0 rows

**while**  $m(A_T) < m(A)$  **do**

**Determine block size**  $b$

$$\begin{pmatrix} A_T \\ A_B \end{pmatrix} \rightarrow \begin{pmatrix} A_0 \\ A_1 \\ A_2 \end{pmatrix}$$

**where**  $A_1$  has  $b$  rows

$$C = A_1^T A_1 + C$$

$$\begin{pmatrix} A_T \\ A_B \end{pmatrix} \leftarrow \begin{pmatrix} A_0 \\ A_1 \\ A_2 \end{pmatrix}$$

**endwhile**