$$\overline{DE} \parallel \overline{BC} \Rightarrow \frac{|DE|}{|BC|} = \frac{|AD|}{|AB|} = \frac{|AE|}{|AC|}$$

$$\left. \begin{array}{c} \vec{D} = \vec{E} + \vec{DE} \\ \vec{DE} = |\vec{DE}|\hat{x} = \frac{|BC| \times |AE|}{|AC|}\hat{x} \end{array} \right\} \Rightarrow$$

$$\vec{D} = (x_A + \frac{(x_C - x_B) \times (y_E - y_A)}{y_C - y_A})\hat{x} + (y_E)\hat{y}$$

- X & Y positions for points A(= E), B & C can be extracted manually
- Y position for point E(= D) is already extracted from ram_state
- So X position for D can be calculated.