$\begin{array}{ll} \textbf{Scalar} & \text{serif font, non-bold} \\ a, \alpha, \gamma, x, \xi, y, z \end{array}$

Vectors : serif, bold $a = a_i, \alpha, \gamma, x, \xi, y, z, \dots$

 $\begin{array}{ll} \textbf{Matrix} & \text{serif font, bold, (uppercase)} \\ \textbf{\textit{A}} = A_{ij}, \textbf{\textit{\Gamma}}, \textbf{\textit{X}}, \textbf{\textit{\Xi}}, \textbf{\textit{Y}}, \textbf{\textit{Z}}, \dots \end{array}$

Tensor sans-serif font, bold, uppercase $\mathbf{A} = A_{ijk}, \mathbf{X}, \mathbf{Y}, \mathbf{Z}, \dots$

Random variable/vector serif font, non-bold, uppercase $A = A_i, X, Y, Z, \dots$

 \mathbf{Sets} using mathbb command $\mathbb{C},\mathbb{R},\mathbb{N},\mathbb{Z}$