

Exercise 1 Let $\vec{\mathbf{v}} = \langle 1, -2, 2 \rangle$. Find the unit vector $\hat{\mathbf{u}}$ in the direction of $\vec{\mathbf{v}}$.

$$\hat{\mathbf{u}} = \left\langle \boxed{\frac{1}{3}}, \boxed{-\frac{2}{3}}, \boxed{\frac{2}{3}} \right\rangle$$
