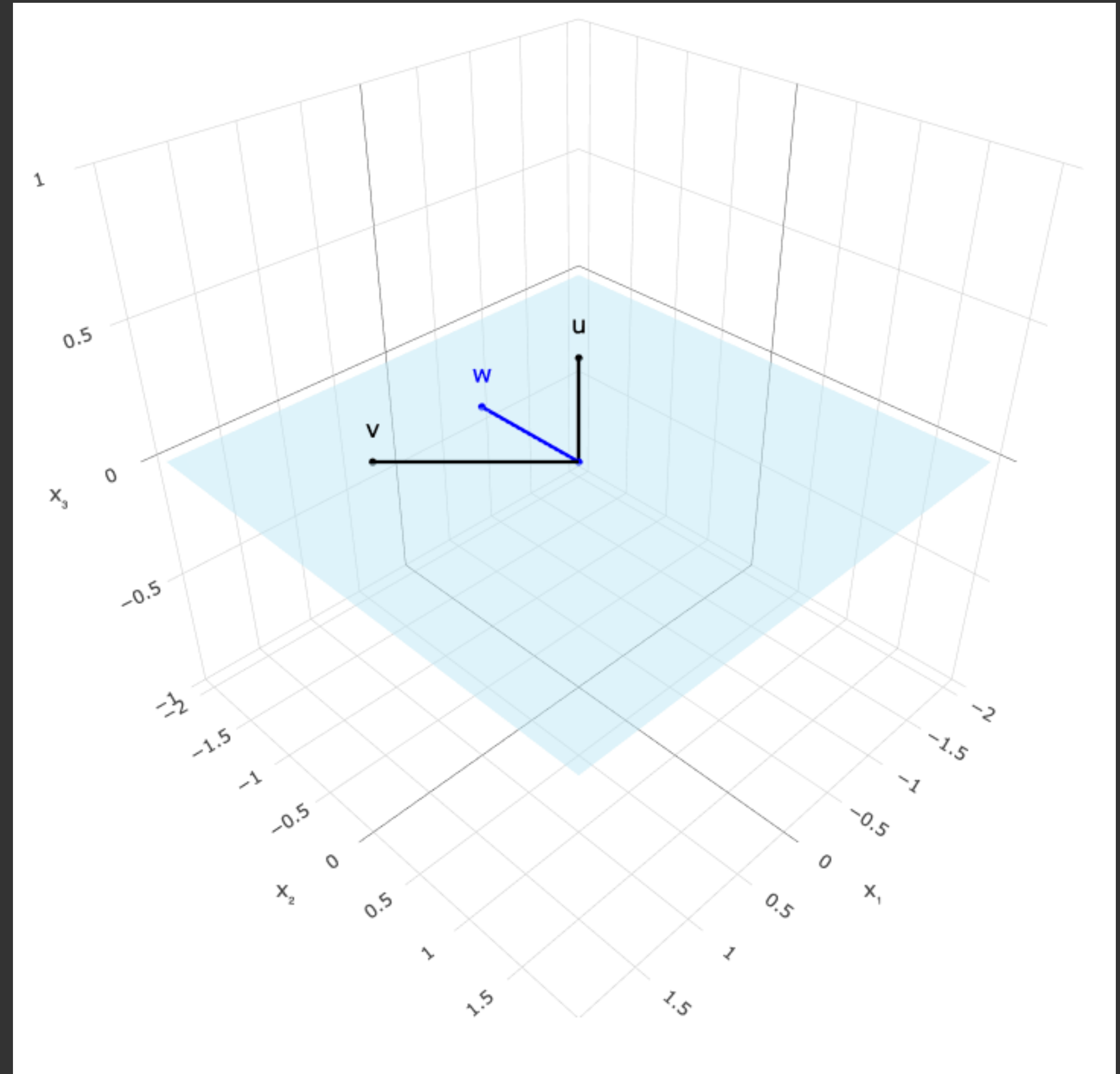


linear independence and spanning vectors

- \vec{w} is in $\text{span}(\vec{u}, \vec{v})$ or the plane spanned by (\vec{u}, \vec{v})
- \vec{w} is a linear combination of (\vec{u}, \vec{v}) , so $(\vec{u}, \vec{v}, \vec{w})$ is not linear independent.



linear independence and spanning vectors

- Since \vec{w} is not in $\text{span}(\vec{u}, \vec{v})$, $(\vec{u}, \vec{v}, \vec{w})$ is linear independent.

