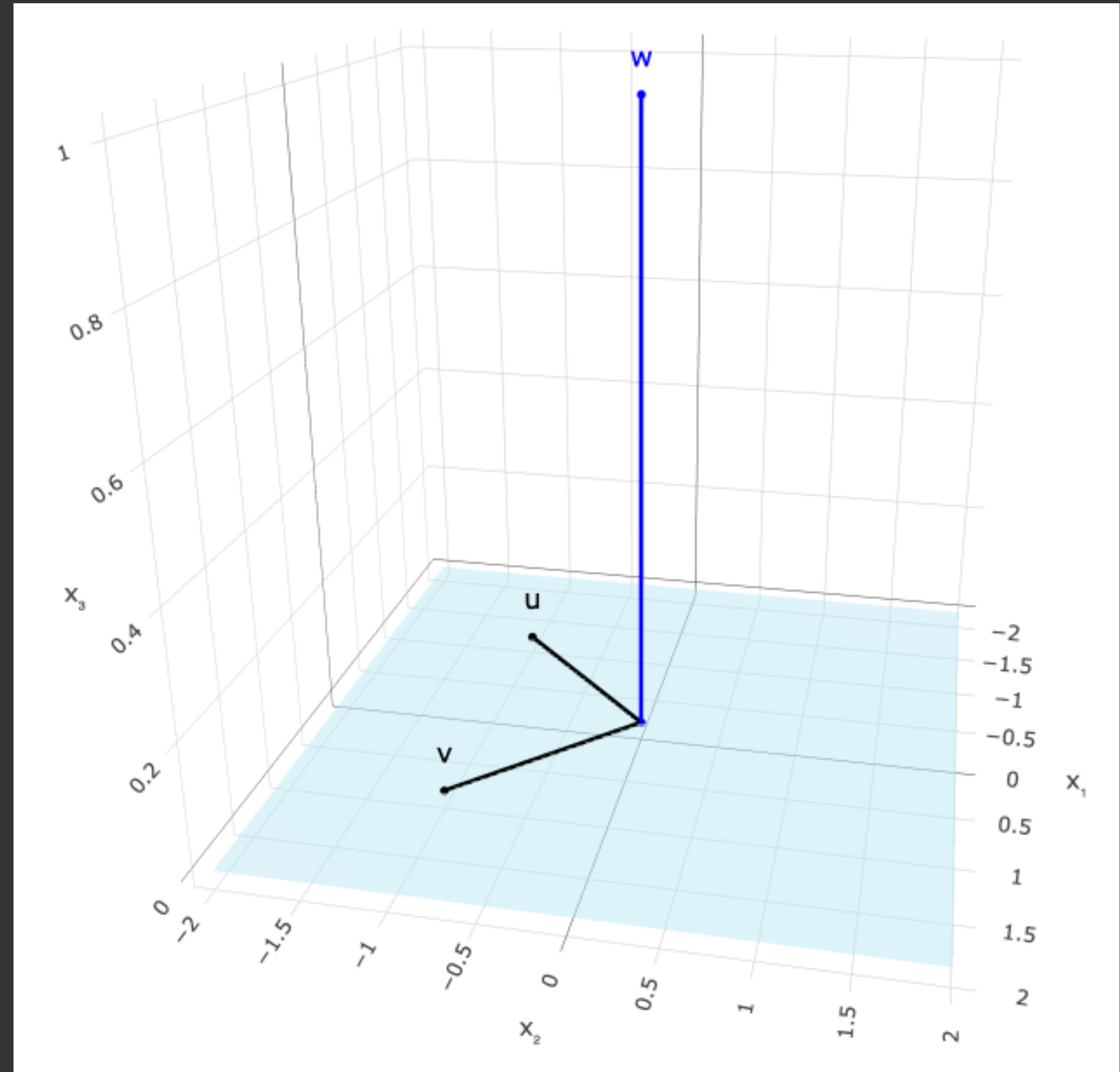


# linear independence and spanning vectors

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



rank