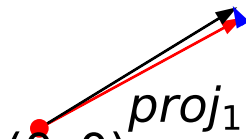first and and second principal components of $\vec{v_1}$

$\vec{v_1} = (3.38, 2.07)$

$proj_2\vec{v_1} = (-0.10, 0.18)$

$|\vec{v_1}|^2 = |proj_1\vec{v_1}|^2 + |proj$

$3.47^2 + 1.89^2 + -0.10^2$

$proj_1\vec{v_1} = (3.47, 1.89)$

$(0, 0)$