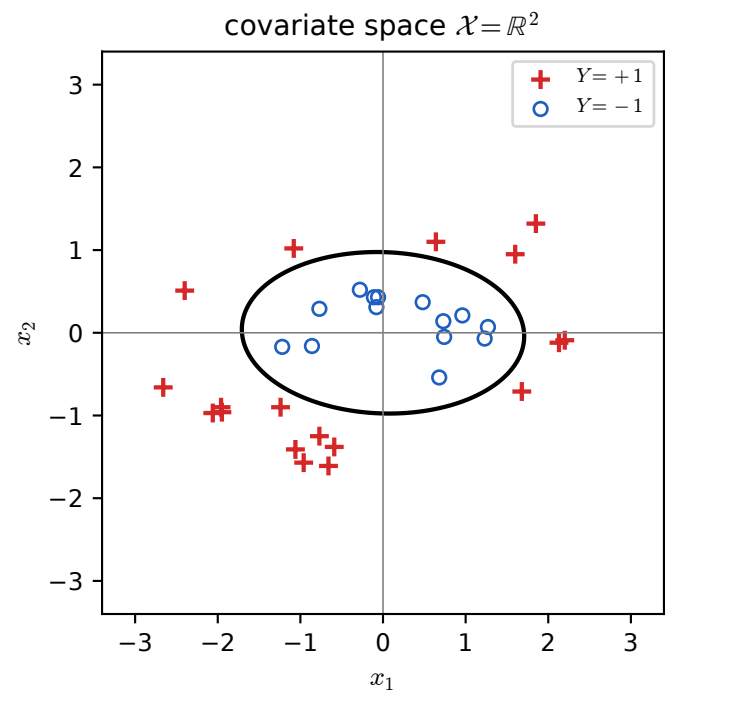
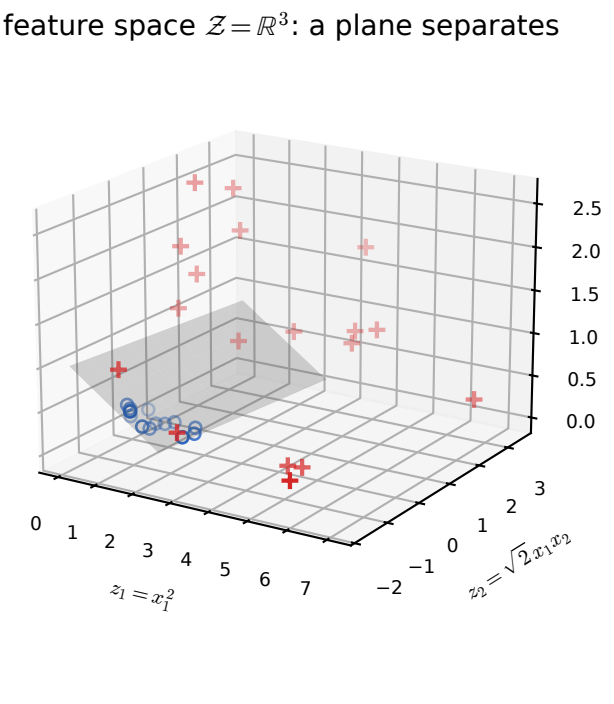

covariate space $\mathcal{X}=\mathbb{R}^2$
$Y=+1$
$Y=-1$
x_1
x_2


feature space $\mathcal{Z}=\mathbb{R}^3$: a plane separates
$z_1=x_1^2$
$z_2=\sqrt{2}x_1x_2$