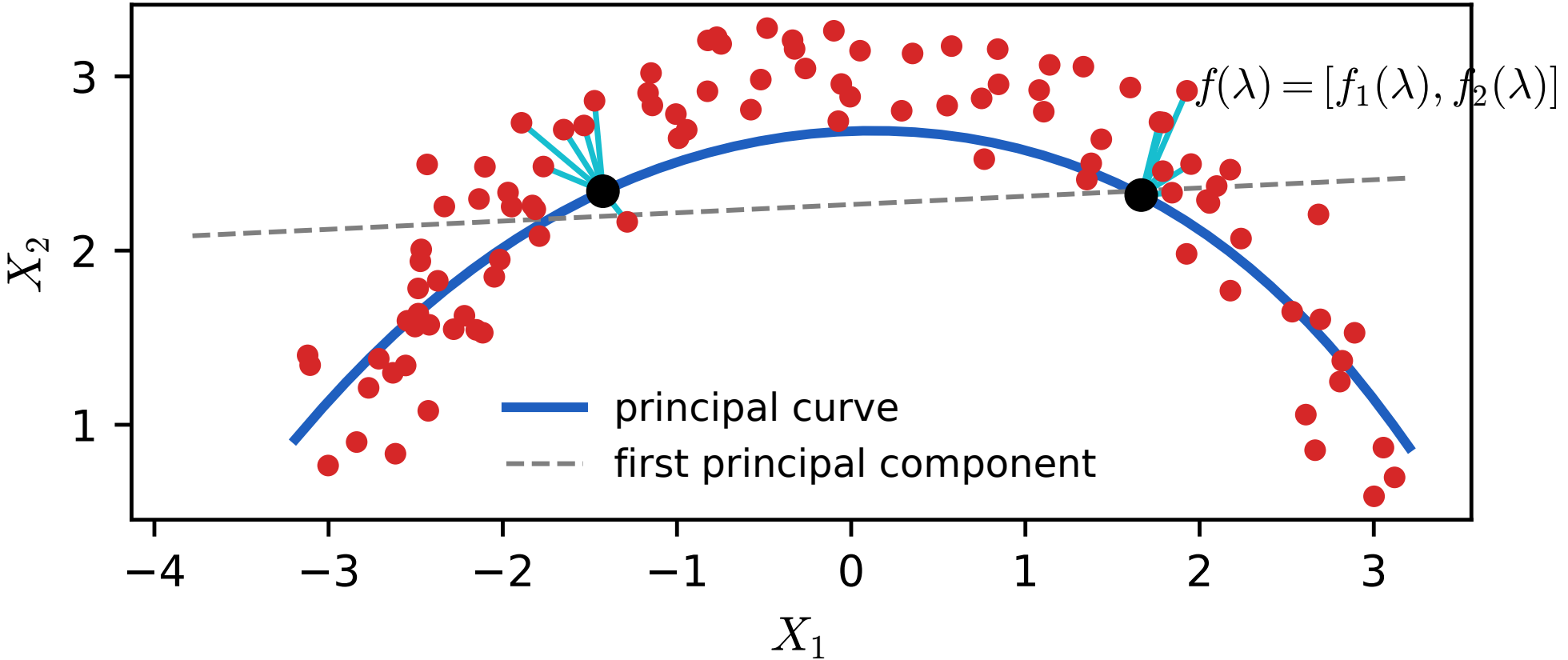

$f(\lambda) = [f_1(\lambda), f_2(\lambda)]$
principal curve
first principal component
X_1
X_2
−4
−3
−2
−1
0
1
2
3
1
2
3