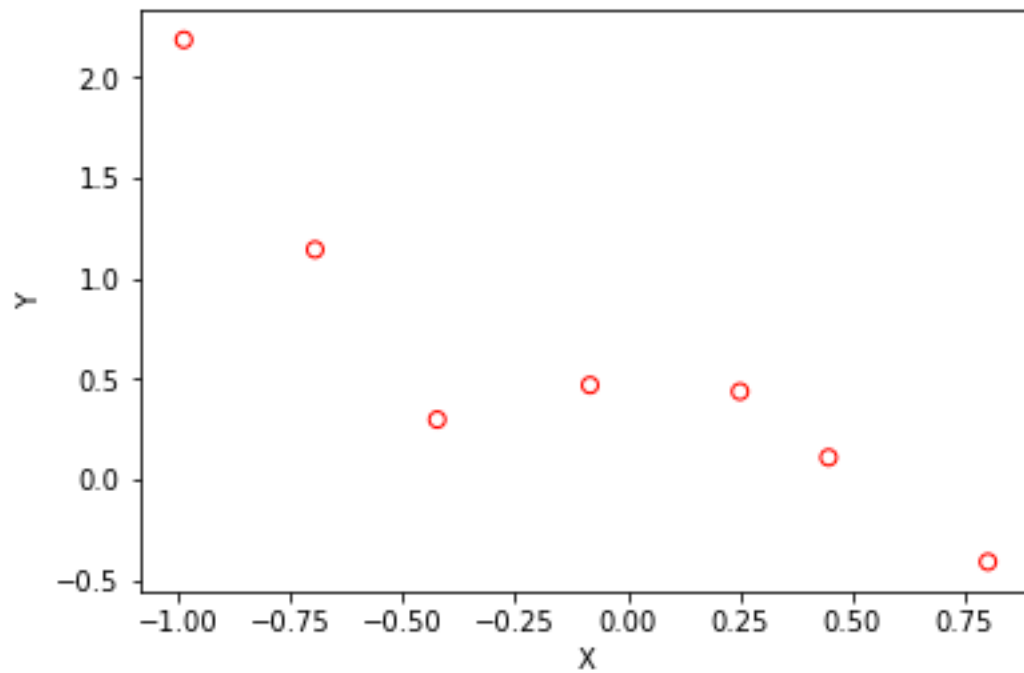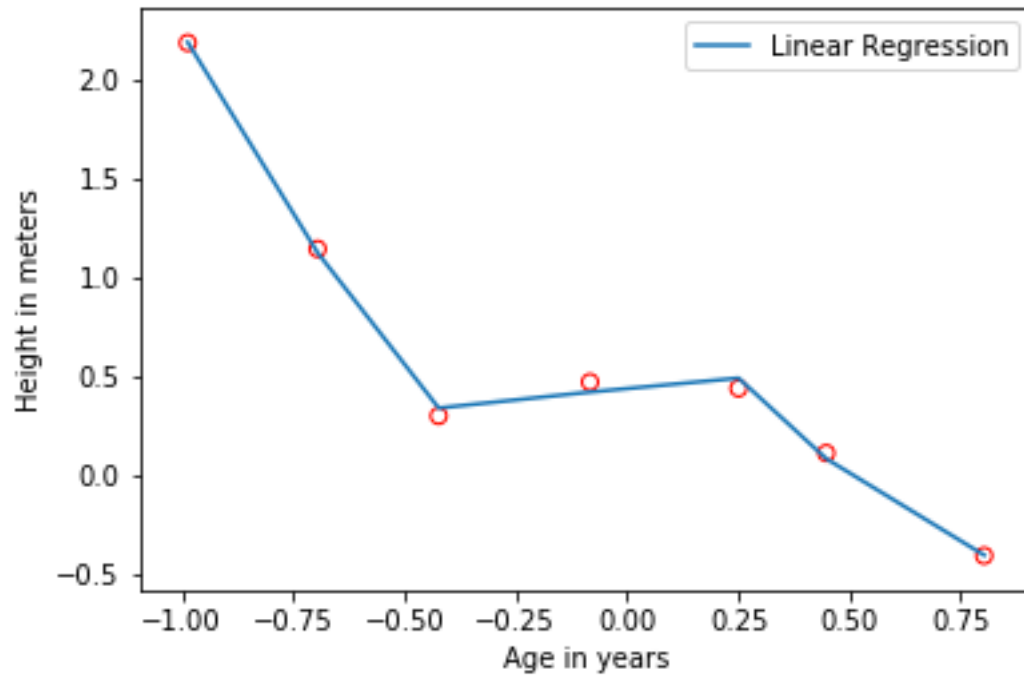Plot of original data:

lambda: 0
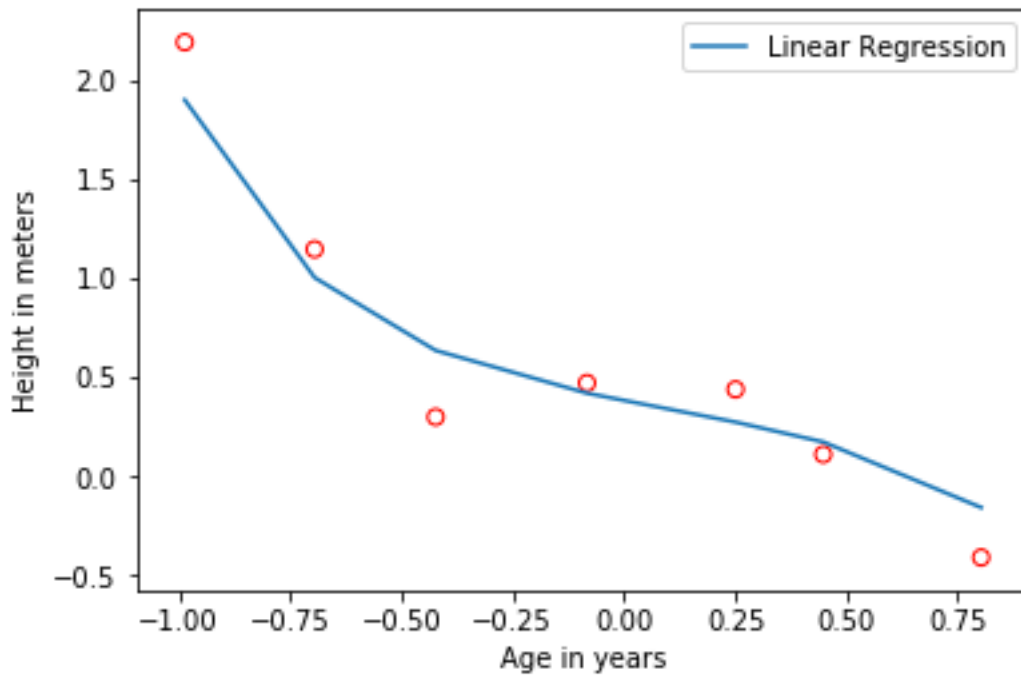theta: array([0.49917479, 0.83306615, -2.03845857, -6.93424088, 3.39424083, 5.75306609])
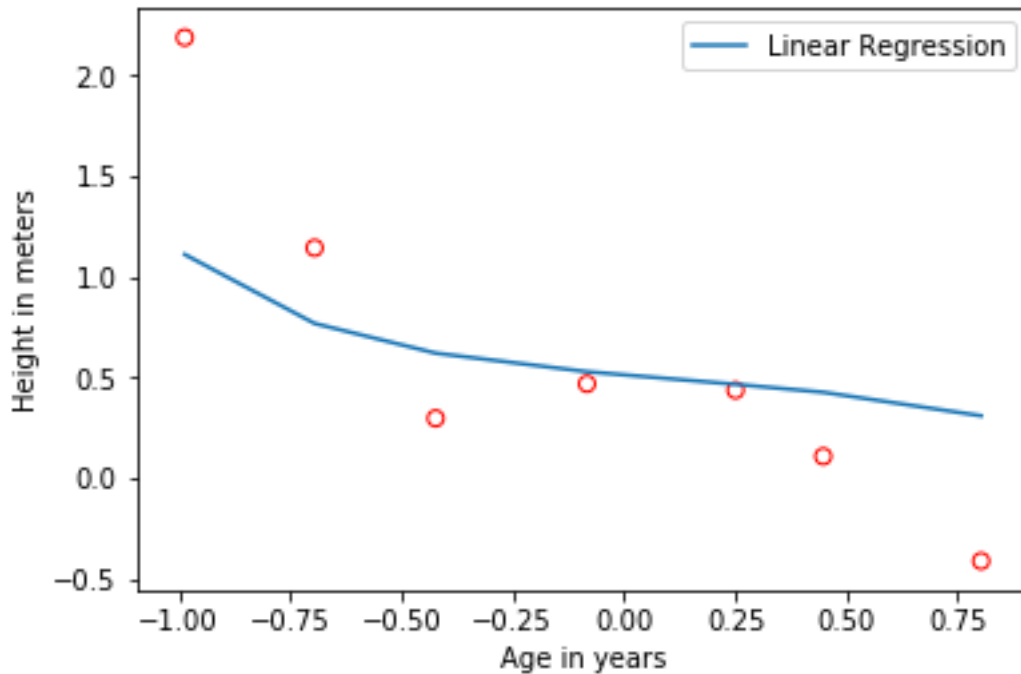L2Norm: 9.8894299563366523

lambda: 1

theta: array([0.38106374, -0.43781896, 0.12880159, -0.43609185, 0.1933533 ,
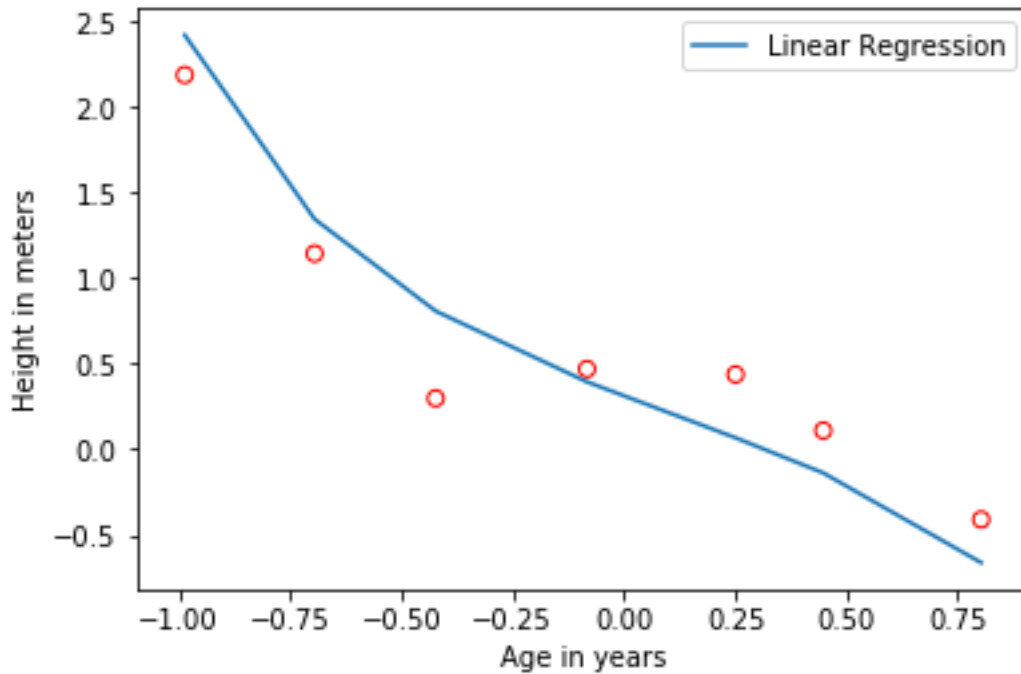-0.37688109])
L2Norm: 0.85034452774484648

lambda: 10
theta: array([0.51357264, -0.19100471, 0.06437106, -0.15400044, 0.07903144,
-0.13137918])
L2Norm: 0.59296363841252353

lambda: -1
theta: array([0.31089401, -0.98611001, 0.18116587, -0.48964457, 0.16984902,
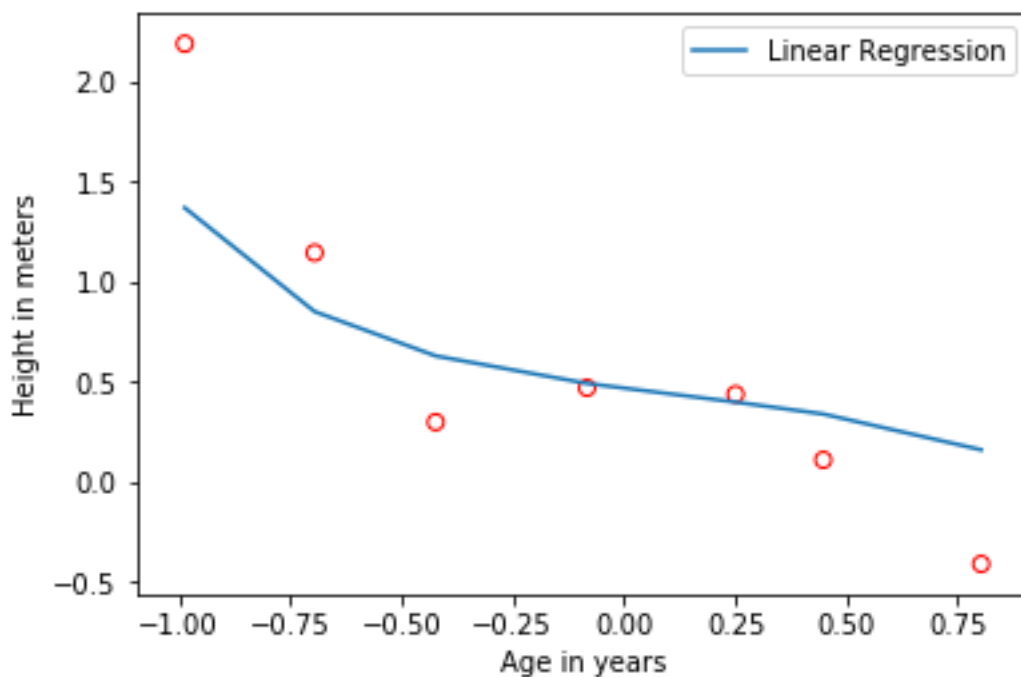-0.34777078])
L2Norm: 1.2212428600852612

lambda: 5 t
heta: array([0.46756365, -0.28432857, 0.09426909, -0.23548116, 0.1184942 ,
-0.20138849])
L2Norm: 0.64683439678612598

lambda: 12
theta: array([0.52443515, -0.16870046, 0.05701219, -0.13539704, 0.06972039,
-0.1154572])
L2Norm: 0.58588916953416492