Training Set:

x	y	ŷ = a1 + b1 * x	ŷ = a2 + b2 * x**2
1	1.8	1.3682726553225226	1.7517821115698653
2	2.4	2.2314503363672373	2.1554693457436036
3.3	2.3	3.353581321725366	3.082604360229289
4.3	3.8	4.216759002770081	4.105278686802761
5.3	5.3	5.079936683814796	5.397077836158723
1.4	1.5	1.7135437277404084	1.8809620265054614
2.5	2.2	2.6630391768895945	2.4582347713739074
2.8	3.8	2.9219924812030085	2.6721890054859885
4.1	4.0	4.044123466561138	3.879213835665466
5.1	5.4	4.907301147605852	5.117188020464931

MSE linear: 0.2822549465769688
MSE non linear: 0.23555557885704545

Validation Set:

x	y	ŷ = a1 + b1 * x	ŷ = a2 + b2 * x**2
1.5	1.7	1.7998614958448798	1.9199851258089229
2.9	2.7	3.0083102493074803	2.748889579978999
3.7	2.5	3.6988523941432523	3.459379112124779
4.7	2.8	4.562030075187967	4.589703367811246
5.1	5.5	4.907301147605852	5.117188020464931

MSE linear: 0.9996633013239355
MSE non linear: 0.8641550167638993

Model ŷ = a1 + b1 * x is better

x	ŷ = a1 + b1 * x
1.4	1.7135437277404084
2.5	2.6630391768895945
3.6	3.6125346260387805
4.5	4.389394538979023
5.4	5.166254451919268