Experiment 13

Iteration 0: Cost = 2981.1400999999996, Weight = 0.438195, Bias = 0.019848

Iteration 100: Cost = 10.21281181459151, Weight = 1.8549239331110883, Bias = 0.07860900214399227

Iteration 200: Cost = 10.179727439178277, Weight = 1.8544043585313, Bias = 0.09679009231645905

Iteration 300: Cost = 10.146925208878564, Weight = 1.8538870034566641, Bias = 0.11489349187940323

Iteration 400: Cost = 10.114402717545559, Weight = 1.8533718591196744, Bias = 0.1329195328372086

Iteration 500: Cost = 10.082157579552128, Weight = 1.8528589160735094, Bias = 0.15086854575506903

Iteration 600: Cost = 10.050187429615914, Weight = 1.8523481649117155, Bias = 0.16874085978562287

Iteration 700: Cost = 10.018489922625845, Weight = 1.8518395962680343, Bias = 0.18653680267498843

Iteration 800: Cost = 9.987062733469944, Weight = 1.8513332008162315, Bias = 0.20425670076877497

Iteration 900: Cost = 9.955903556865064, Weight = 1.8508289692699236, Bias = 0.22190087901806635

Iteration 1000: Cost = 9.925010107187457, Weight = 1.850326892382411, Bias = 0.239469660985381

Iteration 1100: Cost = 9.894380118305387, Weight = 1.849826960946506, Bias = 0.2569633688506047

Iteration 1200: Cost = 9.864011343412775, Weight = 1.849329165794364, Bias = 0.2743823234168993

Iteration 1300: Cost = 9.833901554864404, Weight = 1.8488334977973166, Bias = 0.2917268441165856

Iteration 1400: Cost = 9.8040485440125, Weight = 1.848339947865704, Bias = 0.3089972490170009
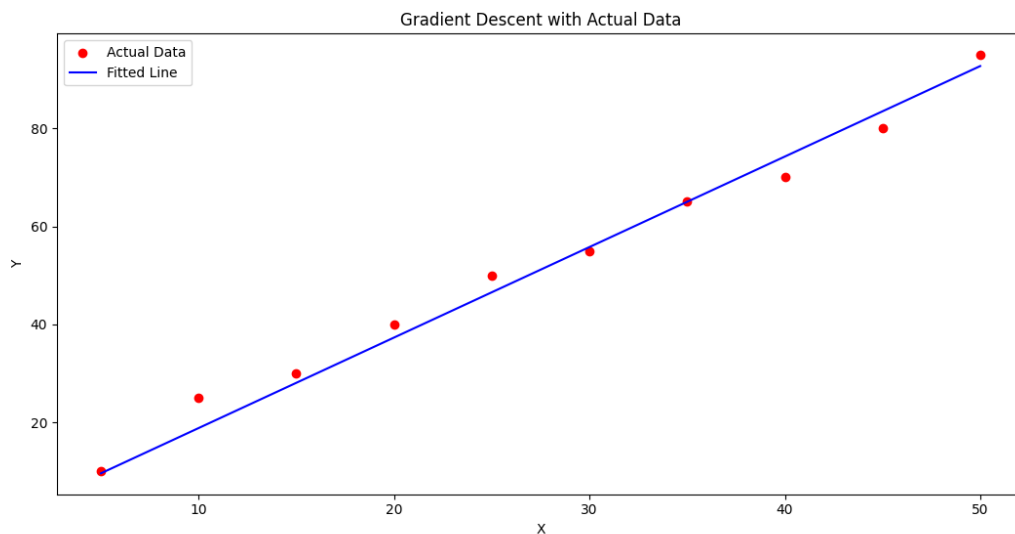
Iteration 1500: Cost = 9.774450121044765, Weight = 1.8478485069487076, Bias = 0.3261938548263321

Iteration 1600: Cost = 9.745104114823729, Weight = 1.847359166034184, Bias = 0.34331697689942303

Iteration 1700: Cost = 9.71600837272746, Weight = 1.8468719161484999, Bias = 0.3603669292435584

Iteration 1800: Cost = 9.687160760491722, Weight = 1.8463867483563685, Bias = 0.3773440245242215

Iteration 1900: Cost = 9.658559162053352, Weight = 1.845903653760684, Bias = 0.39424857407082703

Experiment 14

Iteration 0: Cost = 2897.6501, Weight = 0.433395, Bias = 0.019748

Iteration 100: Cost = 10.421526673877922, Weight = 1.8299077420469538, Bias = 0.08164057787380818

Iteration 200: Cost = 10.37364805149814, Weight = 1.8292827027014864, Bias = 0.10351211335442326

Iteration 300: Cost = 10.32617774026759, Weight = 1.8286603335384743, Bias = 0.1252901883865347

Iteration 400: Cost = 10.279112258089526, Weight = 1.8280406238544273, Bias = 0.14697520236117806

Iteration 500: Cost = 10.232448152562721, Weight = 1.8274235622849835, Bias = 0.16856755294253667

Iteration 600: Cost = 10.186182000728133, Weight = 1.8268091375143425, Bias = 0.1900676360955132

Iteration 700: Cost = 10.140310408817939, Weight = 1.8261973382750583, Bias = 0.21147584609299194

Iteration 800: Cost = 10.094830012006486, Weight = 1.8255881533478326, Bias = 0.23279257552306856

Iteration 900: Cost = 10.049737474163546, Weight = 1.824981571561309, Bias = 0.25401821529624957

Iteration 1000: Cost = 10.005029487609507, Weight = 1.8243775817918668, Bias = 0.27515315465262097

Iteration 1100: Cost = 9.960702772872915, Weight = 1.82377617296342, Bias = 0.2961977811689859

Iteration 1200: Cost = 9.916754078449639, Weight = 1.8231773340472113, Bias = 0.31715248076597197

Iteration 1300: Cost = 9.873180180564695, Weight = 1.822581054061611, Bias = 0.33801763771510973

Iteration 1400: Cost = 9.829977882935506, Weight = 1.8219873220719156, Bias = 0.35879363464587716
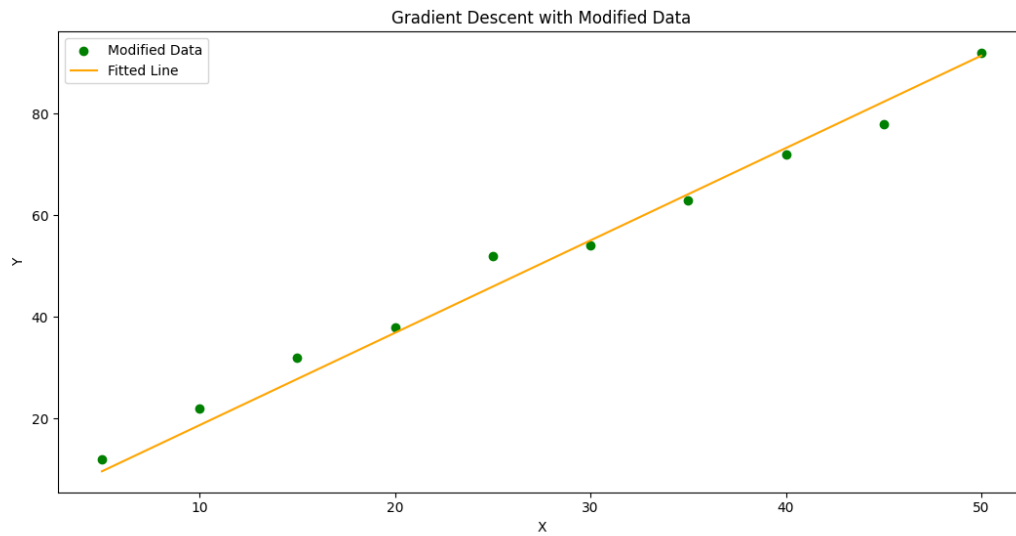
Iteration 1500: Cost = 9.787144016537571, Weight = 1.8213961271901484, Bias = 0.37948085255271924

Iteration 1600: Cost = 9.744675439371992, Weight = 1.8208074585748573, Bias = 0.400079670802032

Iteration 1700: Cost = 9.702569036234948, Weight = 1.8202213054309178, Bias = 0.42059046713912124

Iteration 1800: Cost = 9.660821718489252, Weight = 1.8196376570093344, Bias = 0.4410136176951291

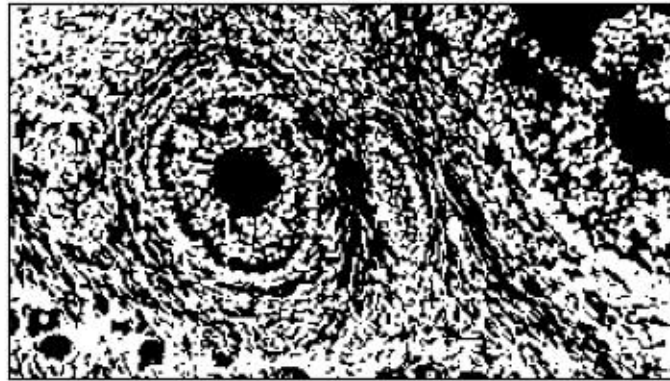Iteration 1900: Cost = 9.619430423837766, Weight = 1.8190565026070447, Bias = 0.4613494969939314

Gradient Descent with Modified Data

Experiment 15

Input Image

Otsu's binary threshold

Experiment 16

morphologyEx:Closing:2x2

Dilation