

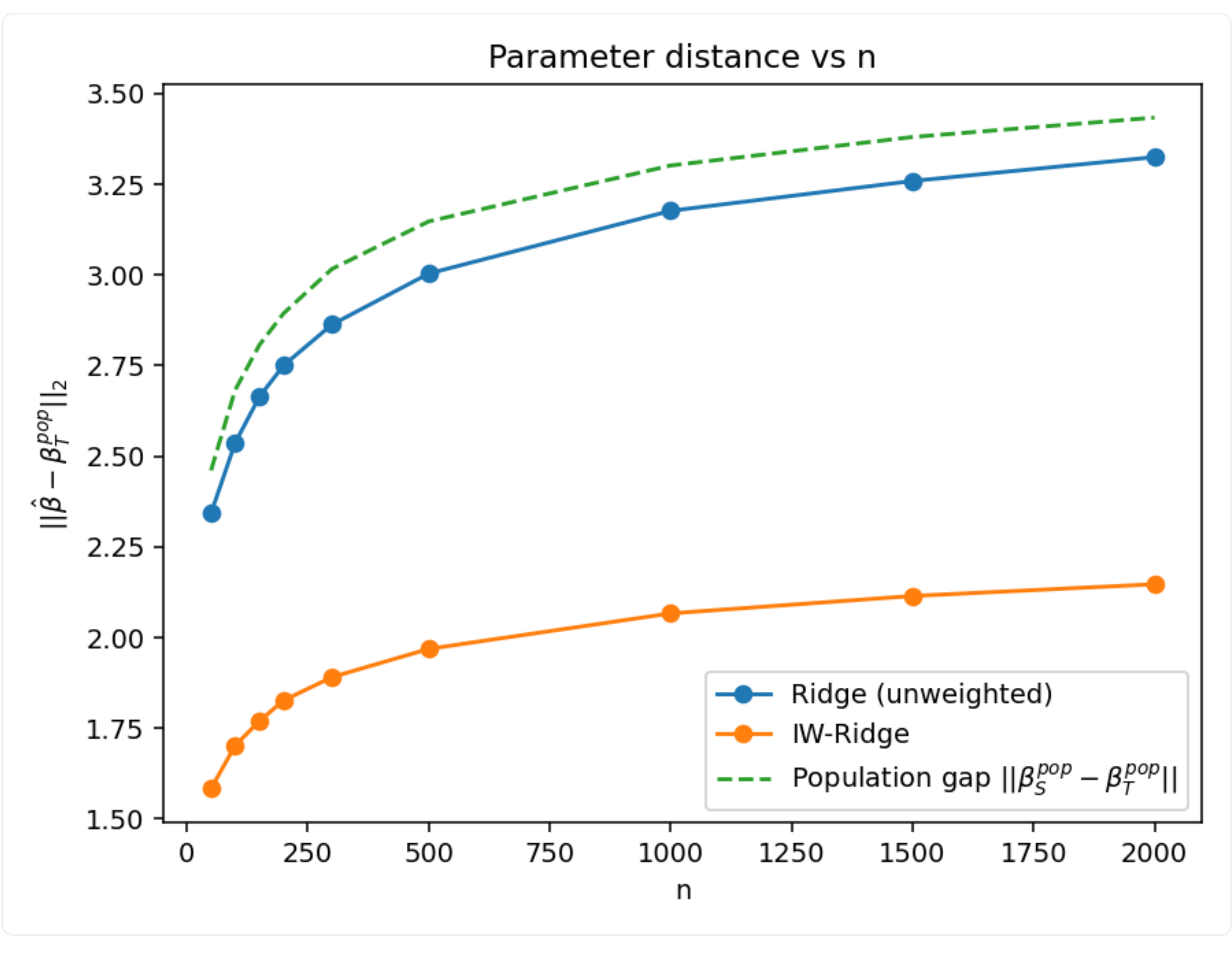
Importance-Weighted Ridge Results

Configuration

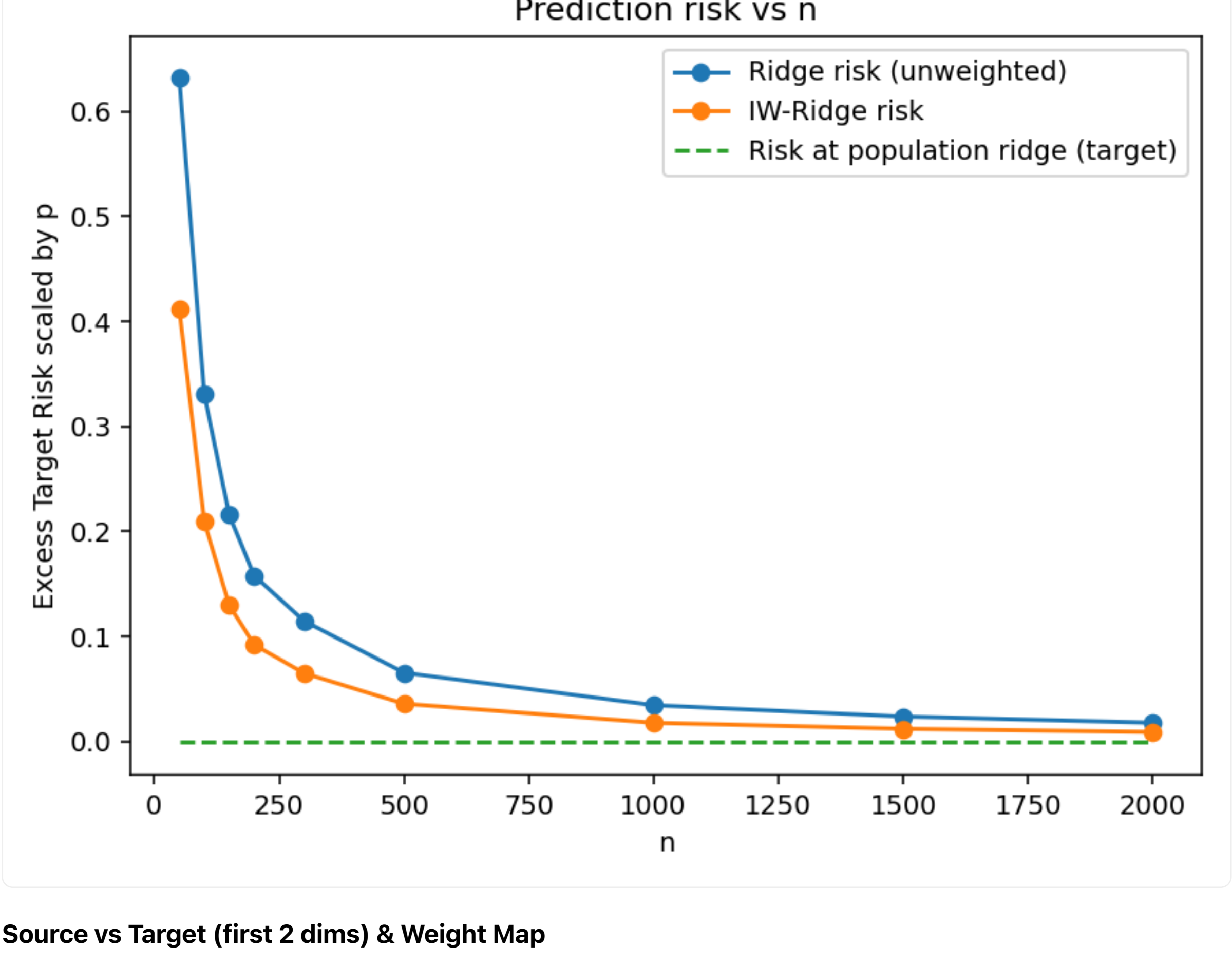
Simulation	
dimension_regime	highdim
gamma = p/n	1.5
sample sizes (n)	50, 100, 150, 200, 300, 500, 1000, 1500, 2000
R (MC replications)	500
Target test set size	1000
Model	
specified	mis
model_style	sparse
Significant beta covariates for model	5
Significant covariates for shift	10
Noise variance	1
Feature families	
Source distribution	gaussian_indep
Source distribution parameters	{ "mu": -1.0, "rho": 0 }
Target distribution	gaussian_indep
Target distribution parameters	{ "mu": 1.5, "rho": 0 }
Weighting	
Weight using only significant covariates (only possible when IID)	True
normalize_weights	True
stabilize_weights	False
Regularization	
Penalty parameter method	sqrtlog
constant (in front of $\sqrt{[\log(p)/n]}$)	1

Figures

Parameter distance from target population coefficient

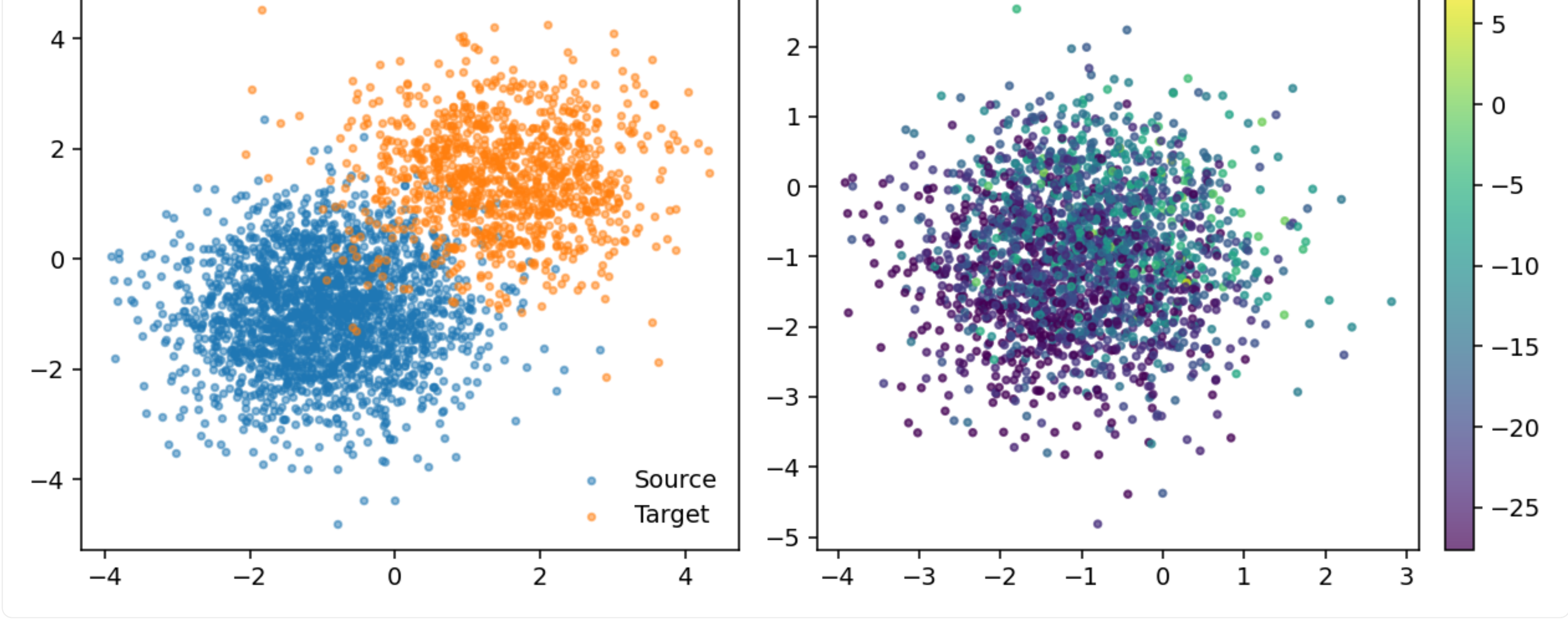


Excess Prediction risk scaled by p



Source vs Target (first 2 dims) & Weight Map

This is a bit hard to interpret since it is just the first 2 coordinates. Sometimes helps to see if the weights look like they are doing the right thing.



Raw summary

{
{
"n": 50,
"p": 75,
"k": 10,
"alpha": 0.29385330059525655,
"pop_gap": 2.4609071633514192,
"dist_unw_mean": 2.342535489756742,
"dist_unw_se": 0.006928778533741192,
"dist_iw_mean": 1.5838572185442177,
"dist_iw_se": 0.002404742221584963,
"risk_unw_mean": 0.6321658615466693,
"risk_unw_se": 0.007162949438085669,
"risk_iw_mean": 0.41215826699721414,
"risk_iw_se": 0.004276322018059048,
"risk_pop_mean": 0.0,
"risk_pop_se": 0.0
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"n": 100,
"p": 150,
"k": 10,
"alpha": 0.22384448382965028,
"pop_gap": 2.68292582827713,
"dist_unw_mean": 2.5373324493301146,
"dist_unw_se": 0.03268940286554303,
"dist_iw_mean": 1.7023000425888077,
"dist_iw_se": 0.0014178647434825806,
"risk_unw_mean": 0.3309907314884578,
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"risk_iw_mean": 0.20974262605128796,
"risk_iw_se": 0.001983131261932491,
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"n": 150,
"p": 225,
"k": 10,
"alpha": 0.1900193043211561,
"pop_gap": 2.806853139813335,
"dist_unw_mean": 2.6639415768039387,
"dist_unw_se": 0.004503381785085253,
"dist_iw_mean": 1.7698255822334967,
"dist_iw_se": 0.001254081879028313,
"risk_unw_mean": 0.21591973472040393,
"risk_unw_se": 0.001721999406656869,
"risk_iw_mean": 0.1299280755578466,
"risk_iw_se": 0.0012117009792897485,
"risk_pop_mean": 0.0,
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"p": 300,
"k": 10,
"alpha": 0.16887543448731968,
"pop_gap": 2.8940924226477307,
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"dist_unw_se": 0.003981760959737312,
"dist_iw_mean": 1.826668874953416,
"dist_iw_se": 0.0010027769158933353,
"risk_unw_mean": 0.15797104535305928,
"risk_unw_se": 0.0010570840867663695,
"risk_iw_mean": 0.0922530364086651,
"risk_iw_se": 0.0007992538679237312,
"risk_pop_mean": 0.0,
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"n": 300,
"p": 450,
"k": 10,
"alpha": 0.1427030434476243,
"pop_gap": 3.016566651844967,
"dist_unw_mean": 2.863142176703819,
"dist_unw_se": 0.0033559222883954164,
"dist_iw_mean": 1.8909103434786225,
"dist_iw_se": 0.0008277586715491943,
"risk_unw_mean": 0.1148340048909285,
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"risk_pop_mean": 0.0,
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"dist_iw_se": 0.0005564776026653062,
"risk_unw_mean": 0.06561725981603359,
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"risk_iw_mean": 0.036058062347059425,
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"risk_pop_mean": 0.0,
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"risk_unw_se": 0.00012253402836359702,
"risk_iw_mean": 0.01789742282529168,
"risk_iw_se": 8.814991000362938e-05,
"risk_pop_mean": 0.0,
"risk_pop_se": 0.0
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"p": 2250,
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"dist_unw_se": 0.00177722558448455,
"dist_iw_mean": 2.1146877808016487,
"dist_iw_se": 0.00034434093555395353,
"risk_unw_mean": 0.023852207943872522,
"risk_unw_se": 6.968619915271035e-05,
"risk_iw_mean": 0.012196082602948325,
"risk_iw_se": 5.0414080585494057e-05,
"risk_pop_mean": 0.0,
"risk_pop_se": 0.0
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"n": 2000,
"p": 3000,
"k": 10,
"alpha": 0.06327071821802818,
"pop_gap": 3.4337939780541866,
"dist_unw_mean": 3.324904662518684,
"dist_unw_se": 0.0016354387658506463,
"dist_iw_mean": 2.14706164445192,
"dist_iw_se": 0.0003052829481895762,
"risk_unw_mean": 0.017935700665500057,
"risk_unw_se": 5.076747860327982e-05,
"risk_iw_mean": 0.00919541599066998,
"risk_iw_se": 3.6794484034789586e-05,
"risk_pop_mean": 0.0,
"risk_pop_se": 0.0
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