

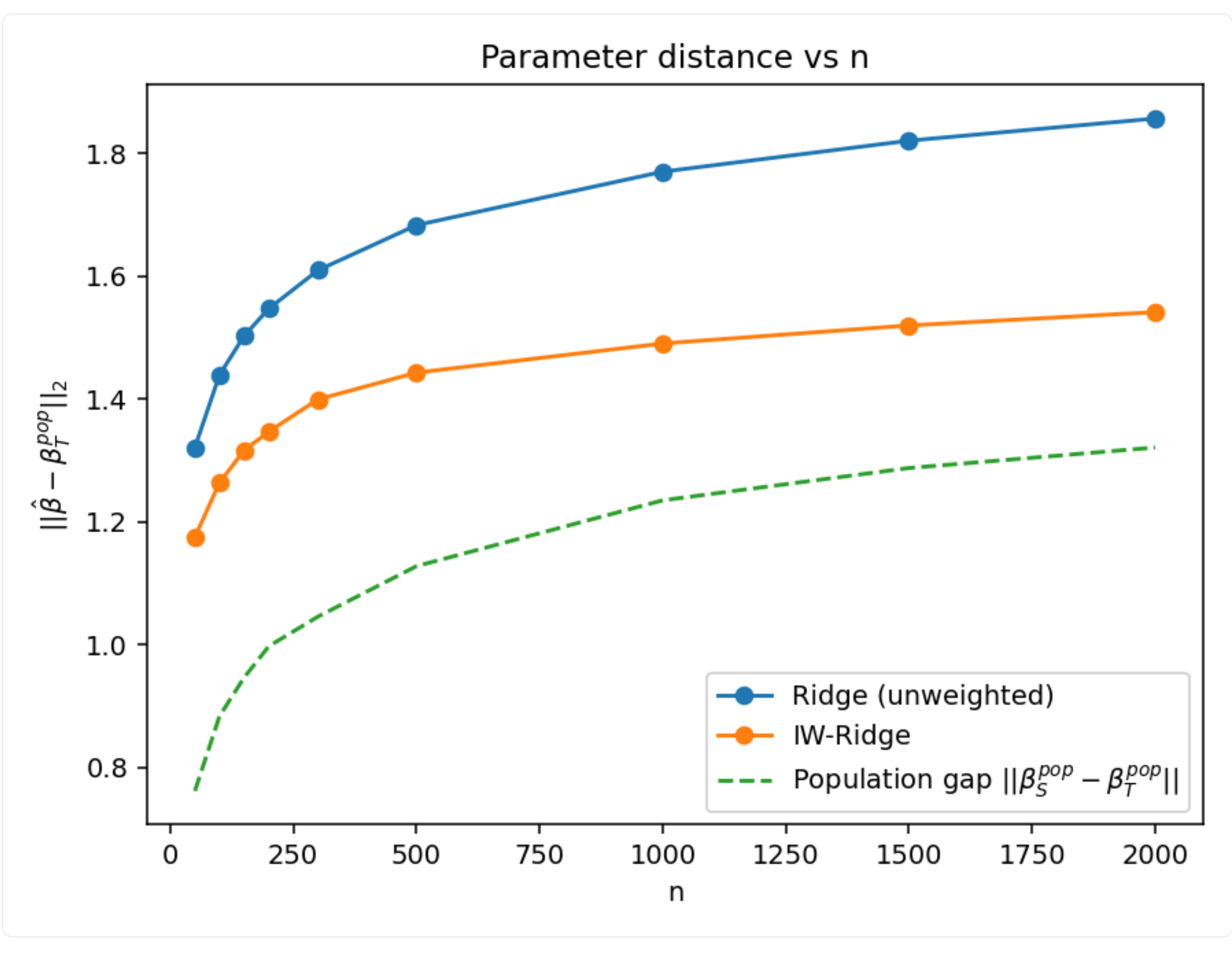
Importance-Weighted Ridge Results

Configuration

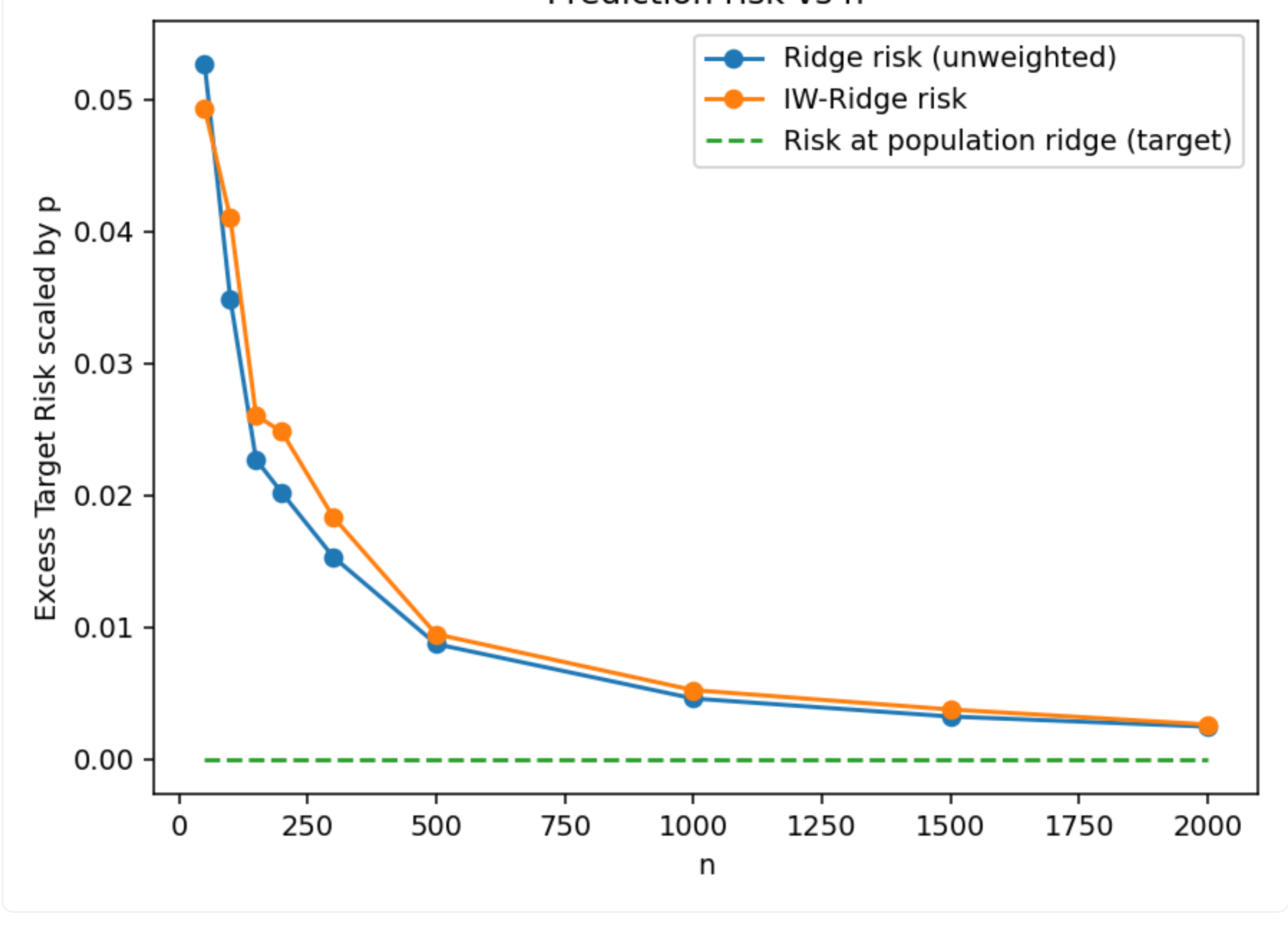
Simulation	
dimension_regime	highdim
gamma = p/n	1.5
sample sizes (n)	50, 100, 150, 200, 300, 500, 1000, 1500, 2000
R (MC replications)	500
Target test set size	1000
Model	
specified	mis
model_style	sparse
Significant beta covariates for model	5
Significant covariates for shift	10
Noise variance	1
Feature families	
Source distribution	gaussian_indep
Source distribution parameters	{ "mu": 2.0, "b": 4 }
Target distribution	laplace_indep
Target distribution parameters	{ "mu": 1.0, "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

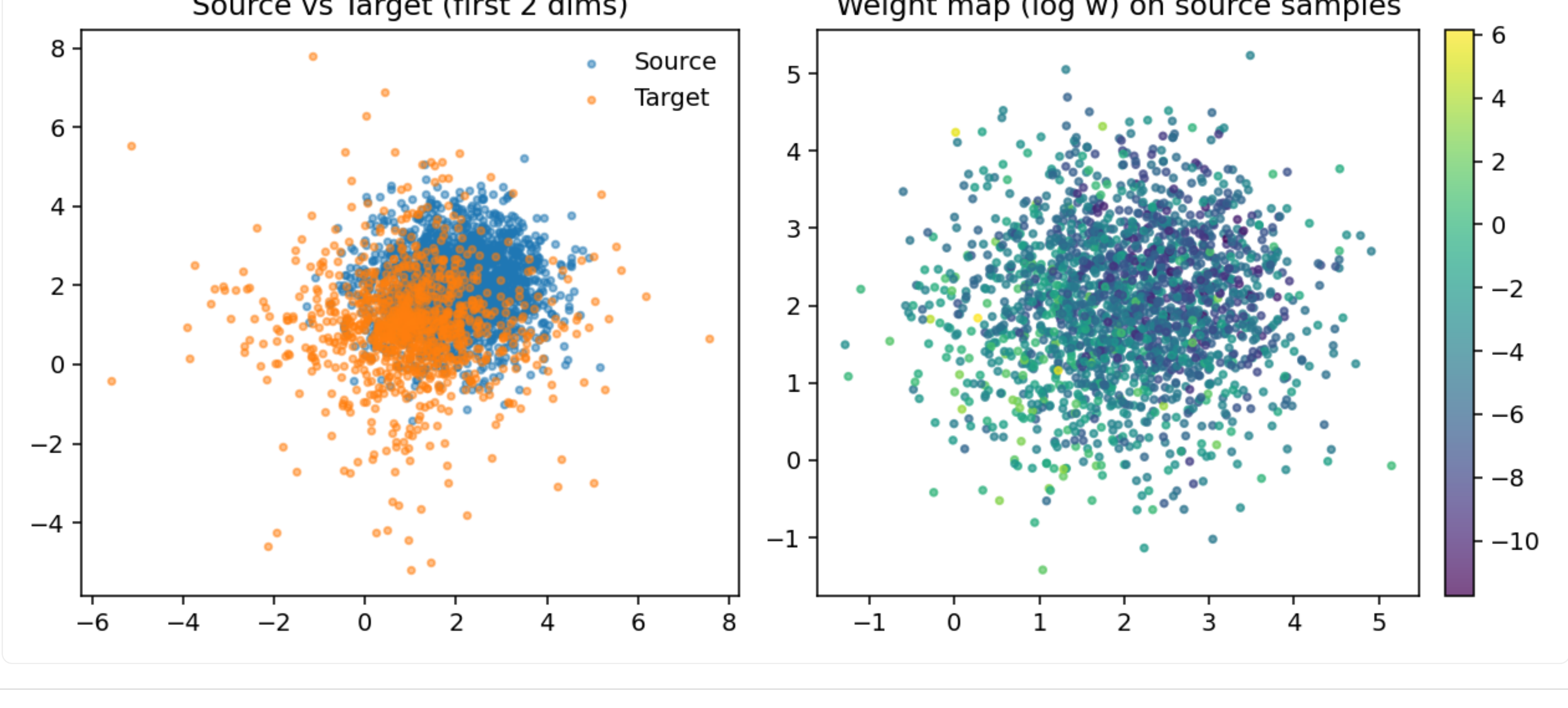


Excess Prediction risk scaled by p



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": 0.7622650239556902,
"dist_unw_mean": 1.3213517746771413,
"dist_unw_se": 0.004659334794542859,
"dist_iw_mean": 1.1753470550424723,
"dist_iw_se": 0.003954516646302527,
"risk_unw_mean": 0.05273504077813887,
"risk_unw_se": 0.000582948167846185,
"risk_iw_mean": 0.04938159135520531,
"risk_iw_se": 0.0006992035156460406,
"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": 0.8840703466171453,
"dist_unw_mean": 1.439417373554352,
"dist_unw_se": 0.0035038436611420317,
"dist_iw_mean": 1.264039414453077,
"dist_iw_se": 0.0026619806601254708,
"risk_unw_mean": 0.03490674829557788,
"risk_unw_se": 0.00031750830623136165,
"risk_iw_mean": 0.04105238827509405,
"risk_iw_se": 0.0003288336476660148,
"risk_pop_mean": 0.0,
"risk_pop_se": 0.0
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"n": 150,
"p": 225,
"k": 10,
"alpha": 0.1900193043211561,
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"dist_unw_mean": 1.5030447013437034,
"dist_unw_se": 0.0031028471870569716,
"dist_iw_mean": 1.3166271211261746,
"dist_iw_se": 0.002102838924748312,
"risk_unw_mean": 0.0227246941212943,
"risk_unw_se": 0.00019063461690901307,
"risk_iw_mean": 0.026069660410589827,
"risk_iw_se": 0.0001855518999382384,
"risk_pop_mean": 0.0,
"risk_pop_se": 0.0
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"n": 200,
"p": 300,
"k": 10,
"alpha": 0.16887543448731968,
"pop_gap": 0.9978091219560256,
"dist_unw_mean": 1.5471910786905319,
"dist_unw_se": 0.002686661458580013,
"dist_iw_mean": 1.3470026906210606,
"dist_iw_se": 0.00158389326760528,
"risk_unw_mean": 0.020219608811507733,
"risk_unw_se": 0.00014499097835237918,
"risk_iw_mean": 0.024833681346028834,
"risk_iw_se": 0.00013979685872652769,
"risk_pop_mean": 0.0,
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"n": 300,
"p": 450,
"k": 10,
"alpha": 0.1427030434476243,
"pop_gap": 1.0460833266094047,
"dist_unw_mean": 1.609727126893435,
"dist_unw_se": 0.002189910127227493,
"dist_iw_mean": 1.3996136580932705,
"dist_iw_se": 0.0014455157694959156,
"risk_unw_mean": 0.0051250306484761,
"risk_unw_se": 9.666729113806731e-05,
"risk_iw_mean": 0.018372986996232434,
"risk_iw_se": 0.00011047917820003688,
"risk_pop_mean": 0.0,
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},
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"p": 750,
"k": 10,
"alpha": 0.11506583512520435,
"pop_gap": 1.128122465899306,
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"dist_unw_se": 0.001927071480047751,
"dist_iw_mean": 1.4430895092100073,
"dist_iw_se": 0.001141719342460839,
"risk_unw_mean": 0.008742123960829688,
"risk_unw_se": 4.63892182778684e-05,
"risk_iw_mean": 0.009489808286486351,
"risk_iw_se": 5.12300300889033e-05,
"risk_pop_mean": 0.0,
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"n": 1000,
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"risk_unw_se": 2.286824316819447e-05,
"risk_iw_mean": 0.005251325870871791,
"risk_iw_se": 2.016765019650153e-05,
"risk_pop_mean": 0.0,
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"p": 2250,
"k": 10,
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"dist_unw_se": 0.001217339681584428,
"dist_iw_mean": 1.519366968204844,
"dist_iw_se": 0.0007017273243480307,
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"risk_unw_se": 1.4494131862418966e-05,
"risk_iw_mean": 0.0037824568947604515,
"risk_iw_se": 1.2334669753163427e-05,
"risk_pop_mean": 0.0,
"risk_pop_se": 0.0
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"n": 2000,
"p": 3000,
"k": 10,
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"pop_gap": 1.3212614847799669,
"dist_unw_mean": 1.8566370163858996,
"dist_unw_se": 0.001089404995406621,
"dist_iw_mean": 1.5415567828801282,
"dist_iw_se": 0.0005793074380867245,
"risk_unw_mean": 0.00248268195878938,
"risk_unw_se": 1.09679602963648905e-05,
"risk_iw_mean": 0.002646705036223711,
"risk_iw_se": 9.421461543835741e-06,
"risk_pop_mean": 0.0,
"risk_pop_se": 0.0
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}