Supporting Information for "Effect of model space priors on statistical inference with model uncertainty"

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1 Dataset specific results for all metrics from Table 3 of paper

The following document contains results for each datasets under various combinations of parameter and model space priors discussed in the paper. We report the mean and standard deviation of metrics over 100 bootstrapped datasets (or train-test splits for prediction metrics) under different methods.

Table S1: Average RMSE($\times$1000) for parameter estimates using various techniques for all datasets averaged over 100 bootstrapped samples; Numbers in brackets represent standard deviation over 100 bootstrapped samples

Parameter prior	$P(\mathcal{M}_\gamma)$	College	Tmax-Bias Correction	Tmin-Bias Correction	Bike Sharing Daily	Bike Sharing Hourly	SML 2010	Diabetes	Superconducitivity	Ozone	Boston Housing	Nutrimouse	multidrug	NIR	Liver
$g=\sqrt{n}$	BB(1, 1)	22.207 (5.761)	2.598 (0.59)	2.18 (0.457)	1043.521 (358.873)	31.68 (8.793)	77.741 (18.987)	1668.608 (379.832)	23.521 (5.407)	18.606 (8.831)	591.299 (155.459)	274.28 (21.292)	113.247 (8.97)	487.037 (196.942)	582.706 (20.282)
$g=\sqrt{n}$	BB($1, b_{SDM}$)	22.259 (5.923)	2.596 (0.594)	2.233 (0.476)	1013.931 (347.818)	31.823 (9.784)	79.172 (20.186)	1653.906 (354.742)	22.834 (5.507)	18.259 (8.638)	605.003 (167.447)	278.589 (20.737)	114.133 (9.059)	519.534 (249.779)	579.186 (20.63)
$g=\sqrt{n}$	BB($1, b_{EB}$)	22.291 (5.931)	2.658 (0.564)	2.097 (0.429)	1106.556 (402.817)	31.758 (8.48)	79.042 (17.516)	1669.14 (343.569)	23.048 (5.423)	18.484 (9.048)	600.231 (177.353)	285.239 (20.997)	113.864 (9.783)	462.058 (158.909)	582.47 (20.867)
Hyper-g	BB(1, 1)	22.973 (6.909)	2.599 (0.686)	2.56 (0.602)	985.092 (353.002)	32.814 (10.165)	87.417 (27.023)	1673.154 (368.317)	22.604 (5.763)	18.182 (9.556)	616.533 (202.572)	240.157 (41.378)	115.706 (9.372)	554.777 (329.007)	587.943 (27.507)
EB-local	BB(1, 1)	22.894 (6.792)	2.6 (0.671)	2.562 (0.604)	976.349 (339.751)	33.419 (11.641)	87.299 (27.342)	1693.532 (400.038)	23.479 (6.302)	18.623 (10.603)	621.8 (197.197)	241.141 (51.57)	118.252 (11.948)	585.861 (357.749)	584.972 (33.328)
EB-local	BB($1, b_{EB}$)	23.219 (6.962)	2.587 (0.676)	2.466 (0.629)	980.613 (340.176)	33.136 (10.873)	87.118 (27.055)	1714.391 (382.961)	23.277 (6.184)	18.483 (10.136)	658.388 (210.368)	249.552 (44.873)	113.78 (10.206)	590.075 (426.387)	589.585 (25.596)
Hyper-g	BB($1, b_{EB}$)	23.191 (6.867)	2.6 (0.677)	2.451 (0.655)	980.642 (347.538)	33.807 (12.319)	86.686 (27.094)	1685.186 (377.698)	22.849 (5.199)	18.418 (11.17)	619.326 (201.491)	259.113 (47.915)	114.823 (10.135)	529.459 (294.107)	587.238 (27.956)
EB-local	BB($1, b_{SDM}$)	22.953 (6.842)	2.616 (0.689)	2.66 (0.595)	981.754 (345.046)	33.782 (11.2)	89.817 (27.069)	1664.905 (370.299)	23.26 (5.927)	18.832 (10.785)	685.187 (404.012)	247.745 (46.778)	115.979 (11.977)	595.952 (299.174)	587.21 (26.846)
Hyper-g	BB($1, b_{SDM}$)	22.887 (6.83)	2.619 (0.689)	2.678 (0.603)	981.395 (333.401)	33.28 (10.418)	90.045 (27.104)	1688.816 (371.326)	23.897 (6.156)	19.011 (11.437)	656.405 (213.028)	253.786 (43.173)	116.242 (9.703)	543.659 (293.605)	590.748 (28.218)
$g=\sqrt{n}$	Ber(θ_{SDM})	22.006 (5.811)	2.684 (0.672)	2.803 (0.529)	1032.178 (311.581)	34.193 (10.257)	99.292 (22.799)	1640.878 (341.53)	23.553 (5.512)	18.297 (9.328)	728.053 (209.298)	274.731 (16.995)	113.882 (11.289)	491.486 (198.711)	577.676 (33.901)
$g=\sqrt{n}$	Ber(θ_{EB})	21.939 (5.761)	2.627 (0.638)	2.581 (0.526)	992.723 (334.607)	31.659 (9.388)	88.082 (23.45)	2392.042 (729.524)	24.052 (6.078)	23.864 (8.086)	656.221 (242.858)	290.414 (22.604)	116.446 (9.979)	519.892 (281.369)	588.495 (32.884)
EB-local	Ber(θ_{EB})	22.176 (6.585)	2.727 (0.721)	3.093 (0.523)	979.474 (327.011)	33.448 (10.046)	98.627 (26.455)	2338.274 (623.536)	22.522 (5.834)	20.498 (9.18)	686.677 (551.51)	260.832 (42.39)	118.179 (12.938)	601.838 (438.893)	595.501 (38.973)
Hyper-g	Ber(θ_{EB})	22.12 (6.722)	2.731 (0.721)	3.077 (0.534)	977.353 (326.038)	33.81 (10.356)	98.781 (25.752)	2300.879 (567.991)	22.907 (5.748)	20.668 (9.366)	628.917 (232.159)	269.944 (46.379)	117.796 (12.389)	629.506 (426.174)	598.202 (36.251)
Hyper-g	Ber(θ_{SDM})	22.302 (6.692)	2.83 (0.747)	3.326 (0.501)	1042.542 (311.955)	38.716 (12.02)	107.584 (23.778)	1676.267 (400.587)	26.251 (9.113)	18.091 (10.374)	796.317 (276.339)	245.653 (45.012)	117.331 (10.424)	524.908 (290.718)	595.861 (29.346)
EB-local	Ber(θ_{SDM})	22.377 (6.763)	2.831 (0.759)	3.328 (0.49)	1049.635 (315.02)	38.59 (12.126)	108.076 (23.499)	1670.476 (414.775)	26.83 (9.475)	18.445 (10.998)	752.631 (224.586)	241.437 (43.73)	117.516 (13.266)	618.783 (376.452)	589.002 (36.801)
$g=\sqrt{n}$	Uniform	21.96 (5.807)	2.616 (0.641)	2.587 (0.528)	994.988 (337.794)	32.325 (9.969)	88.505 (23.417)	2382.497 (629.129)	24.523 (6.044)	24.056 (8.09)	645.285 (255.093)	336.183 (74.749)	151.053 (26.343)	897.529 (580.793)	600.036 (38.725)
Hyper-g	Uniform	22.173 (6.597)	2.717 (0.71)	3.084 (0.54)	979.619 (326.742)	34.301 (10.824)	99.142 (25.94)	2348.285 (669.215)	22.888 (5.604)	20.642 (8.924)	618.653 (218.722)	309.117 (88.412)	148.506 (30.53)	889.166 (578.477)	609.027 (44.628)
EB-local	Uniform	22.138 (6.676)	2.726 (0.73)	3.091 (0.524)	979.713 (330.133)	33.808 (10.574)	98.361 (26.194)	2363.269 (666.496)	22.223 (5.8)	20.397 (9.205)	628.714 (278.923)	305.528 (93.645)	155.001 (30.58)	849.621 (484.487)	614.925 (39.509)
$g=\sqrt{n}$	Complexity(1)	25.482 (6.802)	3.074 (0.766)	3.603 (0.467)	1307.143 (356.039)	41.933 (11.081)	123.797 (14.064)	1775.838 (325.383)	28.86 (9.303)	19.073 (9.772)	873.637 (155.562)	294.929 (24.626)	116.806 (8.923)	516.183 (334.78)	582.38 (21.028)
EB-local	Complexity(1)	27.497 (7.155)	3.38 (0.879)	3.985 (0.453)	1317.758 (373.046)	47.482 (12.872)	125.009 (15.645)	1864.424 (347.932)	34.743 (13.949)	20.431 (11.544)	891.94 (212.928)	283.775 (31.757)	116.708 (9.363)	601.749 (385.919)	588.244 (30.382)
Hyper-g	Complexity(1)	27.447 (7.145)	3.383 (0.89)	3.987 (0.43)	1327.962 (376.787)	47.684 (13.027)	124.562 (14.129)	1856.406 (349.399)	34.638 (13.01)	20.157 (11.617)	924.667 (228.576)	281.134 (20.111)	116.22 (8.649)	597.397 (412.165)	592.085 (26.063)
$g=\sqrt{n}$	Complexity(2)	31.134 (9.316)	3.934 (0.955)	4.185 (0.457)	1924.936 (411.71)	57.613 (13.49)	134.089 (14.555)	2191.659 (291.97)	49.882 (15.316)	22.828 (15.087)	941.107 (58.866)	361.813 (25.643)	117.937 (0.697)	496.401 (220.271)	581.388 (13.825)
EB-local	Complexity(2)	33.128 (9.434)	4.239 (1.067)	4.334 (0.442)	1866.438 (437.31)	64.63 (15.908)	132.629 (15.154)	2264.994 (328.33)	56.986 (27.617)	22.202 (13.413)	950.344 (69.237)	356.894 (57.982)	118.076 (1.999)	512.882 (226.216)	581.809 (18.456)
Hyper-g	Complexity(2)	33.138 (9.245)	4.248 (1.079)	4.371 (0.464)	1863.606 (440.693)	63.52 (14.751)	132.217 (14.762)	2263.618 (326.846)	59.805 (28.784)	22.034 (13.212)	953.545 (74.598)	355.904 (51.698)	118.021 (0.357)	531.29 (318.641)	579.524 (21.755)

Table S2: Average Mean interval score for parameter estimates using various techniques for all datasets averaged over 100 bootstrapped samples; Numbers in brackets represent standard deviation over 100 bootstrapped samples

Parameter prior	$P(\mathcal{M}_\gamma)$	College	Tmax-Bias Correction	Tmin-Bias Correction	Bike Sharing Daily	Bike Sharing Hourly	SML 2010	Diabetes	Superconducitivity	Ozone	Boston Housing	Nutrimouse	multidrug	NIR	Liver
$g = \sqrt{n}$	BB(1, 1)	0.104 (0.048)	0.012 (0.003)	0.01 (0.002)	4.895 (2.406)	0.141 (0.037)	0.33 (0.09)	6.684 (2.82)	0.091 (0.027)	0.066 (0.04)	2.271 (0.686)	1.395 (0.411)	0.385 (0.071)	1.154 (0.39)	0.969 (0.091)
$g = \sqrt{n}$	BB(1, b_{SDM})	0.105 (0.05)	0.012 (0.003)	0.01 (0.002)	4.685 (2.354)	0.137 (0.039)	0.333 (0.099)	6.43 (2.98)	0.087 (0.027)	0.059 (0.038)	2.467 (1.092)	1.579 (0.442)	0.403 (0.066)	1.192 (0.443)	0.964 (0.104)
$g = \sqrt{n}$	BB(1, b_{EB})	0.104 (0.048)	0.012 (0.003)	0.01 (0.002)	5.102 (2.505)	0.14 (0.034)	0.343 (0.097)	6.528 (2.931)	0.088 (0.021)	0.056 (0.039)	2.382 (0.845)	2.001 (0.348)	0.402 (0.072)	1.1 (0.431)	0.969 (0.103)
Hyper-g	BB(1, 1)	0.12 (0.079)	0.012 (0.005)	0.014 (0.008)	4.455 (2.501)	0.135 (0.076)	0.412 (0.283)	6.652 (3.369)	0.087 (0.038)	0.057 (0.068)	2.847 (1.67)	1.191 (0.546)	0.407 (0.073)	1.388 (0.998)	0.978 (0.099)
EB-local	BB(1, 1)	0.121 (0.08)	0.012 (0.004)	0.014 (0.008)	4.451 (2.497)	0.134 (0.07)	0.409 (0.275)	6.483 (3.389)	0.094 (0.039)	0.06 (0.072)	2.896 (1.695)	1.201 (0.558)	0.409 (0.063)	1.421 (0.867)	0.956 (0.13)
EB-local	BB(1, b_{EB})	0.125 (0.087)	0.012 (0.004)	0.013 (0.007)	4.528 (2.582)	0.14 (0.083)	0.413 (0.275)	6.917 (3.478)	0.095 (0.047)	0.06 (0.074)	3.091 (1.801)	1.414 (0.595)	0.387 (0.066)	1.366 (0.769)	0.981 (0.094)
Hyper-g	BB(1, b_{EB})	0.125 (0.08)	0.012 (0.004)	0.013 (0.008)	4.465 (2.561)	0.151 (0.145)	0.413 (0.277)	6.806 (3.651)	0.088 (0.036)	0.063 (0.081)	2.759 (1.659)	1.556 (0.61)	0.409 (0.069)	1.313 (0.635)	0.983 (0.107)
EB-local	BB(1, b_{SDM})	0.121 (0.078)	0.012 (0.005)	0.016 (0.01)	4.611 (2.757)	0.143 (0.089)	0.451 (0.329)	6.636 (3.364)	0.096 (0.044)	0.062 (0.076)	3.259 (2.004)	1.249 (0.547)	0.403 (0.083)	1.482 (0.726)	0.987 (0.093)
Hyper-g	BB(1, b_{SDM})	0.121 (0.083)	0.012 (0.005)	0.016 (0.01)	4.52 (2.66)	0.149 (0.097)	0.456 (0.321)	6.955 (3.831)	0.101 (0.054)	0.063 (0.083)	3.365 (2.02)	1.378 (0.56)	0.414 (0.07)	1.365 (0.711)	0.977 (0.1)
$g = \sqrt{n}$	Ber(θ_{SDM})	0.101 (0.052)	0.012 (0.005)	0.016 (0.008)	4.968 (2.96)	0.156 (0.109)	0.473 (0.277)	6.319 (2.977)	0.098 (0.041)	0.055 (0.038)	4.457 (2.219)	1.478 (0.326)	0.398 (0.076)	1.148 (0.385)	0.95 (0.132)
$g = \sqrt{n}$	Ber(θ_{EB})	0.1 (0.05)	0.012 (0.004)	0.013 (0.005)	4.452 (2.354)	0.132 (0.047)	0.366 (0.171)	16.673 (2.906)	0.097 (0.02)	0.141 (0.02)	2.848 (0.536)	2.228 (0.304)	0.409 (0.075)	1.169 (0.424)	0.993 (0.118)
EB-local	Ber(θ_{EB})	0.109 (0.067)	0.013 (0.006)	0.024 (0.013)	4.529 (2.717)	0.143 (0.089)	0.584 (0.431)	16.056 (2.817)	0.088 (0.037)	0.099 (0.035)	2.526 (0.89)	1.691 (0.605)	0.413 (0.078)	1.612 (1.376)	1.009 (0.133)
Hyper-g	Ber(θ_{EB})	0.107 (0.068)	0.013 (0.006)	0.024 (0.013)	4.519 (2.661)	0.149 (0.094)	0.593 (0.457)	15.826 (2.734)	0.088 (0.035)	0.099 (0.031)	2.414 (0.67)	1.735 (0.615)	0.414 (0.072)	1.61 (1.21)	1.017 (0.116)
Hyper-g	Ber(θ_{SDM})	0.112 (0.072)	0.015 (0.008)	0.032 (0.015)	5.754 (3.856)	0.208 (0.141)	0.837 (0.556)	6.493 (3.297)	0.131 (0.088)	0.05 (0.061)	5.543 (2.753)	1.176 (0.521)	0.419 (0.07)	1.495 (1.124)	0.98 (0.107)
EB-local	Ber(θ_{SDM})	0.11 (0.069)	0.015 (0.008)	0.032 (0.015)	5.928 (4.017)	0.22 (0.191)	0.854 (0.555)	6.398 (3.3)	0.143 (0.117)	0.059 (0.079)	5.213 (2.557)	1.181 (0.475)	0.417 (0.081)	1.616 (1.066)	0.975 (0.114)
$g = \sqrt{n}$	Uniform	0.101 (0.05)	0.012 (0.004)	0.013 (0.005)	4.457 (2.371)	0.134 (0.049)	0.37 (0.171)	16.71 (2.927)	0.098 (0.021)	0.141 (0.023)	2.84 (0.637)	2.168 (0.708)	0.584 (0.12)	2.568 (1.257)	1.056 (0.127)
Hyper-g	Uniform	0.107 (0.065)	0.013 (0.007)	0.024 (0.013)	4.542 (2.653)	0.153 (0.108)	0.604 (0.443)	16.164 (2.953)	0.086 (0.032)	0.098 (0.031)	2.407 (0.65)	1.97 (0.966)	0.59 (0.15)	2.698 (1.865)	1.089 (0.152)
EB-local	Uniform	0.109 (0.068)	0.013 (0.007)	0.024 (0.013)	4.618 (2.857)	0.147 (0.094)	0.601 (0.454)	16.227 (2.953)	0.085 (0.035)	0.099 (0.034)	2.404 (0.673)	2.041 (1.074)	0.631 (0.199)	2.885 (1.612)	1.101 (0.144)
$g = \sqrt{n}$	Complexity(1)	0.163 (0.11)	0.018 (0.01)	0.044 (0.015)	9.408 (5.227)	0.284 (0.18)	1.251 (0.5)	8.882 (3.732)	0.165 (0.14)	0.067 (0.071)	8.729 (2.307)	2.479 (0.151)	0.462 (0.058)	1.574 (1.028)	0.973 (0.09)
EB-local	Complexity(1)	0.232 (0.155)	0.023 (0.012)	0.066 (0.016)	10.865 (6.235)	0.411 (0.257)	1.469 (0.53)	10.553 (4.287)	0.229 (0.187)	0.089 (0.089)	8.863 (2.608)	2.283 (0.362)	0.436 (0.065)	1.964 (1.387)	0.981 (0.109)
Hyper-g	Complexity(1)	0.235 (0.158)	0.023 (0.012)	0.065 (0.017)	11.128 (6.442)	0.405 (0.228)	1.417 (0.514)	10.099 (4.139)	0.244 (0.197)	0.085 (0.093)	9.427 (2.664)	2.277 (0.285)	0.452 (0.059)	1.928 (1.516)	1 (0.104)
$g = \sqrt{n}$	Complexity(2)	0.305 (0.186)	0.032 (0.015)	0.084 (0.015)	24.468 (9.68)	0.652 (0.29)	1.716 (0.505)	18.395 (4.999)	0.488 (0.26)	0.131 (0.165)	12.649 (1.382)	3.122 (0.446)	0.543 (0.009)	2.223 (0.892)	0.973 (0.079)
EB-local	Complexity(2)	0.377 (0.208)	0.041 (0.019)	0.094 (0.016)	25.186 (10.624)	0.781 (0.342)	1.808 (0.519)	19.203 (5.069)	0.601 (0.394)	0.139 (0.15)	12.881 (1.515)	3.169 (0.642)	0.54 (0.018)	2.14 (0.64)	0.951 (0.095)
Hyper-g	Complexity(2)	0.371 (0.213)	0.041 (0.019)	0.095 (0.014)	24.418 (10.474)	0.754 (0.32)	1.737 (0.514)	19.453 (5.247)	0.652 (0.388)	0.136 (0.144)	13.024 (1.585)	3.112 (0.619)	0.544 (0.007)	2.228 (1.202)	0.95 (0.096)

Table S3: Average 1-AUPRC for variable selection using various techniques for all datasets averaged over 100 bootstrapped samples; Numbers in brackets represent standard deviation over 100 bootstrapped samples

Parameter prior	$P(\mathcal{M}_\gamma)$	College	Tmax-Bias Correction	Tmin-Bias Correction	Bike Sharing Daily	Bike Sharing Hourly	SML 2010	Diabetes	Superconducitivity	Ozone	Boston Housing	Nutrimouse	multidrug	NIR	Liver
$g = \sqrt{n}$	BB(1, 1)	0.036 (0.034)	0.001 (0.003)	0.001 (0.002)	0.017 (0.018)	0.004 (0.008)	0.004 (0.007)	0.168 (0.105)	0.025 (0.02)	0.078 (0.113)	0.144 (0.068)	0.515 (0.11)	0.781 (0.112)	0.671 (0.164)	0.947 (0.083)
$g = \sqrt{n}$	BB(1, b_{SDM})	0.035 (0.033)	0.001 (0.003)	0.001 (0.002)	0.016 (0.016)	0.004 (0.009)	0.004 (0.007)	0.17 (0.103)	0.025 (0.019)	0.075 (0.103)	0.159 (0.075)	0.537 (0.106)	0.787 (0.1)	0.685 (0.161)	0.935 (0.1)
$g = \sqrt{n}$	BB(1, b_{EB})	0.035 (0.032)	0.006 (0.015)	0.003 (0.006)	0.018 (0.023)	0.004 (0.008)	0.01 (0.018)	0.171 (0.1)	0.025 (0.017)	0.082 (0.107)	0.15 (0.068)	0.575 (0.109)	0.79 (0.106)	0.666 (0.164)	0.942 (0.095)
Hyper-g	BB(1, 1)	0.034 (0.034)	0.001 (0.003)	0.002 (0.004)	0.016 (0.019)	0.004 (0.007)	0.006 (0.01)	0.168 (0.102)	0.027 (0.019)	0.084 (0.112)	0.17 (0.088)	0.406 (0.149)	0.797 (0.103)	0.693 (0.173)	0.94 (0.098)
EB-local	BB(1, 1)	0.036 (0.036)	0.001 (0.003)	0.002 (0.004)	0.016 (0.019)	0.005 (0.009)	0.006 (0.009)	0.167 (0.101)	0.028 (0.018)	0.094 (0.128)	0.175 (0.087)	0.413 (0.167)	0.814 (0.097)	0.702 (0.162)	0.933 (0.096)
EB-local	BB(1, b_{EB})	0.037 (0.038)	0.001 (0.003)	0.002 (0.003)	0.016 (0.018)	0.005 (0.008)	0.006 (0.009)	0.167 (0.098)	0.027 (0.019)	0.08 (0.106)	0.187 (0.085)	0.434 (0.156)	0.769 (0.11)	0.68 (0.169)	0.951 (0.075)
Hyper-g	BB(1, b_{EB})	0.034 (0.035)	0.001 (0.003)	0.002 (0.003)	0.016 (0.017)	0.006 (0.012)	0.006 (0.009)	0.162 (0.102)	0.026 (0.016)	0.077 (0.112)	0.176 (0.092)	0.455 (0.15)	0.788 (0.105)	0.675 (0.185)	0.952 (0.081)
EB-local	BB(1, b_{SDM})	0.036 (0.034)	0.001 (0.003)	0.002 (0.004)	0.017 (0.024)	0.005 (0.009)	0.007 (0.01)	0.164 (0.101)	0.027 (0.017)	0.086 (0.112)	0.19 (0.095)	0.424 (0.151)	0.788 (0.131)	0.714 (0.173)	0.949 (0.076)
Hyper-g	BB(1, b_{SDM})	0.035 (0.036)	0.001 (0.003)	0.002 (0.004)	0.016 (0.023)	0.005 (0.008)	0.007 (0.01)	0.17 (0.105)	0.031 (0.023)	0.09 (0.113)	0.194 (0.098)	0.453 (0.147)	0.802 (0.099)	0.672 (0.182)	0.941 (0.095)
$g = \sqrt{n}$	Ber(θ_{SDM})	0.035 (0.034)	0.001 (0.003)	0.002 (0.004)	0.017 (0.018)	0.005 (0.009)	0.007 (0.009)	0.167 (0.099)	0.029 (0.018)	0.078 (0.101)	0.247 (0.1)	0.532 (0.098)	0.788 (0.124)	0.672 (0.156)	0.931 (0.112)
$g = \sqrt{n}$	Ber(θ_{EB})	0.034 (0.035)	0.001 (0.003)	0.002 (0.003)	0.016 (0.021)	0.003 (0.007)	0.005 (0.009)	0.201 (0.123)	0.026 (0.018)	0.092 (0.11)	0.141 (0.059)	0.616 (0.103)	0.805 (0.1)	0.678 (0.163)	0.946 (0.09)
EB-local	Ber(θ_{EB})	0.034 (0.034)	0.001 (0.003)	0.003 (0.004)	0.015 (0.02)	0.005 (0.008)	0.008 (0.01)	0.194 (0.12)	0.027 (0.024)	0.082 (0.107)	0.143 (0.066)	0.486 (0.14)	0.799 (0.117)	0.69 (0.18)	0.94 (0.094)
Hyper-g	Ber(θ_{EB})	0.034 (0.035)	0.001 (0.003)	0.003 (0.005)	0.015 (0.017)	0.005 (0.009)	0.008 (0.011)	0.195 (0.121)	0.025 (0.017)	0.088 (0.121)	0.139 (0.063)	0.492 (0.163)	0.815 (0.112)	0.697 (0.167)	0.942 (0.084)
Hyper-g	Ber(θ_{SDM})	0.032 (0.031)	0.001 (0.002)	0.004 (0.005)	0.018 (0.024)	0.007 (0.009)	0.01 (0.011)	0.167 (0.097)	0.043 (0.039)	0.079 (0.113)	0.267 (0.112)	0.425 (0.158)	0.816 (0.1)	0.677 (0.172)	0.944 (0.086)
EB-local	Ber(θ_{SDM})	0.034 (0.033)	0.001 (0.003)	0.004 (0.005)	0.019 (0.025)	0.008 (0.014)	0.01 (0.011)	0.169 (0.101)	0.044 (0.039)	0.085 (0.122)	0.264 (0.103)	0.422 (0.145)	0.806 (0.126)	0.699 (0.181)	0.942 (0.088)
$g = \sqrt{n}$	Uniform	0.033 (0.034)	0.001 (0.003)	0.002 (0.004)	0.016 (0.018)	0.004 (0.008)	0.006 (0.009)	0.202 (0.117)	0.027 (0.018)	0.096 (0.115)	0.139 (0.06)	0.765 (0.129)	0.892 (0.087)	0.814 (0.143)	0.952 (0.081)
Hyper-g	Uniform	0.034 (0.033)	0.001 (0.003)	0.003 (0.004)	0.015 (0.016)	0.006 (0.01)	0.008 (0.01)	0.199 (0.121)	0.026 (0.02)	0.077 (0.106)	0.14 (0.063)	0.574 (0.2)	0.858 (0.12)	0.785 (0.156)	0.949 (0.084)
EB-local	Uniform	0.034 (0.035)	0.001 (0.002)	0.003 (0.004)	0.016 (0.018)	0.005 (0.008)	0.008 (0.011)	0.2 (0.124)	0.025 (0.018)	0.079 (0.107)	0.138 (0.066)	0.56 (0.185)	0.868 (0.105)	0.807 (0.14)	0.958 (0.074)
$g = \sqrt{n}$	Complexity(1)	0.038 (0.038)	0.001 (0.003)	0.005 (0.006)	0.025 (0.026)	0.01 (0.011)	0.013 (0.01)	0.183 (0.097)	0.051 (0.049)	0.089 (0.1)	0.403 (0.09)	0.639 (0.092)	0.813 (0.1)	0.683 (0.171)	0.95 (0.073)
EB-local	Complexity(1)	0.042 (0.039)	0.003 (0.005)	0.007 (0.007)	0.026 (0.027)	0.016 (0.017)	0.017 (0.012)	0.191 (0.1)	0.067 (0.056)	0.111 (0.123)	0.394 (0.11)	0.567 (0.118)	0.801 (0.099)	0.743 (0.159)	0.954 (0.085)
Hyper-g	Complexity(1)	0.039 (0.04)	0.002 (0.004)	0.006 (0.007)	0.026 (0.025)	0.018 (0.016)	0.017 (0.012)	0.187 (0.095)	0.075 (0.06)	0.106 (0.122)	0.416 (0.105)	0.566 (0.099)	0.811 (0.088)	0.745 (0.178)	0.956 (0.084)
$g = \sqrt{n}$	Complexity(2)	0.04 (0.039)	0.005 (0.006)	0.008 (0.008)	0.048 (0.029)	0.027 (0.02)	0.021 (0.013)	0.297 (0.103)	0.145 (0.082)	0.155 (0.132)	0.507 (0.058)	0.863 (0.055)	0.98 (0.023)	0.854 (0.121)	0.947 (0.072)
EB-local	Complexity(2)	0.048 (0.043)	0.006 (0.007)	0.01 (0.009)	0.053 (0.026)	0.036 (0.02)	0.023 (0.013)	0.289 (0.112)	0.161 (0.081)	0.161 (0.157)	0.511 (0.074)	0.825 (0.1)	0.97 (0.04)	0.848 (0.134)	0.915 (0.098)
Hyper-g	Complexity(2)	0.043 (0.041)	0.007 (0.007)	0.01 (0.01)	0.052 (0.027)	0.034 (0.019)	0.024 (0.014)	0.29 (0.101)	0.174 (0.086)	0.162 (0.139)	0.516 (0.072)	0.824 (0.096)	0.985 (0.009)	0.819 (0.152)	0.923 (0.091)

Table S4: Average $1 - R^2_{test}$ for predictions using various techniques for all datasets averaged over 100 train-test splits; Numbers in brackets represent standard deviation over 100 train-test splits

Parameter prior	$P(\mathcal{M}_\gamma)$	College	Tmax-Bias Correction	Tmin-Bias Correction	Bike Sharing Daily	Bike Sharing Hourly	SML 2010	Diabetes	Superconducitivity	Ozone	Boston Housing	Nutrimouse	multidrug	NIR	Liver
$g = \sqrt{n}$	BB(1, 1)	0.142 (0.021)	0.222 (0.009)	0.165 (0.006)	0.174 (0.032)	0.277 (0.006)	0.073 (0.007)	0.505 (0.054)	0.227 (0.005)	0.269 (0.041)	0.159 (0.05)	0.367 (0.126)	0.897 (0.205)	0.165 (0.061)	0.505 (0.261)
$g = \sqrt{n}$	BB(1, b_{SDM})	0.142 (0.021)	0.222 (0.009)	0.165 (0.006)	0.175 (0.032)	0.277 (0.006)	0.073 (0.007)	0.506 (0.053)	0.227 (0.005)	0.269 (0.041)	0.162 (0.05)	0.367 (0.121)	0.892 (0.173)	0.168 (0.064)	0.509 (0.24)
$g = \sqrt{n}$	BB(1, b_{EB})	0.142 (0.021)	0.222 (0.009)	0.164 (0.006)	0.175 (0.032)	0.277 (0.006)	0.073 (0.007)	0.507 (0.053)	0.227 (0.005)	0.269 (0.04)	0.159 (0.05)	0.384 (0.122)	0.881 (0.18)	0.169 (0.065)	0.516 (0.275)
Hyper-g	BB(1, 1)	0.142 (0.022)	0.222 (0.009)	0.165 (0.006)	0.174 (0.031)	0.277 (0.006)	0.072 (0.007)	0.508 (0.055)	0.227 (0.005)	0.27 (0.044)	0.165 (0.054)	0.371 (0.168)	0.901 (0.171)	0.172 (0.069)	0.507 (0.269)
EB-local	BB(1, 1)	0.142 (0.022)	0.222 (0.009)	0.165 (0.006)	0.174 (0.032)	0.277 (0.006)	0.073 (0.007)	0.508 (0.056)	0.227 (0.005)	0.27 (0.044)	0.165 (0.052)	0.377 (0.184)	0.895 (0.193)	0.175 (0.081)	0.53 (0.343)
EB-local	BB(1, b_{EB})	0.142 (0.022)	0.222 (0.009)	0.165 (0.006)	0.175 (0.032)	0.277 (0.006)	0.072 (0.007)	0.511 (0.055)	0.227 (0.005)	0.27 (0.044)	0.166 (0.054)	0.373 (0.186)	0.911 (0.191)	0.174 (0.069)	0.493 (0.352)
Hyper-g	BB(1, b_{EB})	0.142 (0.023)	0.222 (0.009)	0.165 (0.006)	0.175 (0.032)	0.277 (0.006)	0.072 (0.007)	0.512 (0.055)	0.227 (0.005)	0.27 (0.044)	0.165 (0.055)	0.364 (0.157)	0.924 (0.173)	0.173 (0.072)	0.523 (0.332)
EB-local	BB(1, b_{SDM})	0.142 (0.023)	0.222 (0.009)	0.165 (0.006)	0.175 (0.031)	0.277 (0.006)	0.073 (0.007)	0.51 (0.055)	0.227 (0.005)	0.27 (0.044)	0.166 (0.051)	0.38 (0.228)	0.927 (0.248)	0.173 (0.067)	0.535 (0.357)
Hyper-g	BB(1, b_{SDM})	0.142 (0.023)	0.222 (0.009)	0.165 (0.006)	0.175 (0.031)	0.277 (0.006)	0.073 (0.007)	0.51 (0.055)	0.227 (0.005)	0.27 (0.044)	0.167 (0.053)	0.365 (0.164)	0.921 (0.19)	0.171 (0.066)	0.535 (0.431)
$g = \sqrt{n}$	Ber(θ_{SDM})	0.142 (0.021)	0.222 (0.009)	0.165 (0.006)	0.177 (0.031)	0.278 (0.006)	0.074 (0.007)	0.506 (0.053)	0.228 (0.005)	0.269 (0.04)	0.181 (0.057)	0.364 (0.121)	0.872 (0.245)	0.181 (0.064)	0.492 (0.365)
$g = \sqrt{n}$	Ber(θ_{EB})	0.142 (0.021)	0.222 (0.009)	0.165 (0.006)	0.175 (0.031)	0.277 (0.006)	0.073 (0.007)	0.509 (0.06)	0.227 (0.005)	0.271 (0.043)	0.154 (0.047)	0.402 (0.132)	0.887 (0.237)	0.175 (0.064)	0.483 (0.25)
EB-local	Ber(θ_{EB})	0.142 (0.022)	0.222 (0.009)	0.165 (0.006)	0.175 (0.032)	0.277 (0.006)	0.073 (0.007)	0.509 (0.059)	0.228 (0.005)	0.271 (0.046)	0.158 (0.05)	0.368 (0.174)	0.923 (0.278)	0.174 (0.064)	0.573 (0.46)
Hyper-g	Ber(θ_{EB})	0.142 (0.022)	0.222 (0.009)	0.165 (0.006)	0.175 (0.031)	0.277 (0.006)	0.073 (0.007)	0.509 (0.059)	0.228 (0.005)	0.27 (0.045)	0.157 (0.05)	0.368 (0.158)	0.928 (0.319)	0.173 (0.068)	0.563 (0.419)
Hyper-g	Ber(θ_{SDM})	0.142 (0.022)	0.222 (0.009)	0.165 (0.006)	0.177 (0.031)	0.278 (0.006)	0.073 (0.007)	0.507 (0.055)	0.229 (0.005)	0.27 (0.044)	0.184 (0.061)	0.373 (0.164)	0.924 (0.268)	0.176 (0.068)	0.513 (0.314)
EB-local	Ber(θ_{SDM})	0.142 (0.022)	0.222 (0.009)	0.165 (0.006)	0.177 (0.031)	0.278 (0.006)	0.073 (0.007)	0.508 (0.055)	0.229 (0.005)	0.27 (0.044)	0.183 (0.06)	0.396 (0.222)	0.919 (0.246)	0.182 (0.08)	0.558 (0.452)
$g = \sqrt{n}$	Uniform	0.142 (0.021)	0.222 (0.009)	0.165 (0.006)	0.175 (0.031)	0.277 (0.006)	0.073 (0.007)	0.509 (0.06)	0.227 (0.005)	0.271 (0.043)	0.153 (0.045)	0.614 (0.363)	1.344 (0.732)	0.177 (0.065)	0.543 (0.297)
Hyper-g	Uniform	0.142 (0.022)	0.222 (0.009)	0.165 (0.006)	0.175 (0.031)	0.277 (0.006)	0.073 (0.007)	0.509 (0.059)	0.228 (0.005)	0.27 (0.046)	0.156 (0.049)	0.728 (0.528)	1.253 (0.684)	0.177 (0.066)	0.595 (0.381)
EB-local	Uniform	0.142 (0.022)	0.222 (0.009)	0.165 (0.006)	0.175 (0.032)	0.277 (0.006)	0.073 (0.007)	0.51 (0.059)	0.228 (0.005)	0.27 (0.045)	0.157 (0.049)	0.884 (0.818)	1.452 (1.011)	0.19 (0.078)	0.626 (0.478)
$g = \sqrt{n}$	Complexity(1)	0.144 (0.021)	0.223 (0.009)	0.166 (0.006)	0.185 (0.029)	0.278 (0.006)	0.074 (0.007)	0.526 (0.052)	0.229 (0.005)	0.274 (0.042)	0.198 (0.06)	0.418 (0.126)	0.903 (0.145)	0.192 (0.068)	0.535 (0.27)
EB-local	Complexity(1)	0.143 (0.023)	0.223 (0.009)	0.166 (0.006)	0.185 (0.03)	0.278 (0.006)	0.073 (0.007)	0.53 (0.055)	0.23 (0.005)	0.273 (0.046)	0.197 (0.064)	0.372 (0.176)	0.933 (0.184)	0.195 (0.089)	0.542 (0.262)
Hyper-g	Complexity(1)	0.143 (0.023)	0.223 (0.009)	0.166 (0.006)	0.185 (0.03)	0.278 (0.006)	0.073 (0.007)	0.53 (0.054)	0.23 (0.005)	0.273 (0.046)	0.197 (0.067)	0.38 (0.165)	0.931 (0.131)	0.192 (0.081)	0.572 (0.462)
$g = \sqrt{n}$	Complexity(2)	0.147 (0.022)	0.223 (0.009)	0.166 (0.006)	0.196 (0.031)	0.278 (0.006)	0.076 (0.007)	0.545 (0.052)	0.232 (0.005)	0.286 (0.046)	0.218 (0.063)	0.642 (0.119)	1 (0.006)	0.352 (0.106)	0.845 (0.198)
EB-local	Complexity(2)	0.146 (0.023)	0.223 (0.009)	0.167 (0.006)	0.195 (0.031)	0.279 (0.006)	0.075 (0.007)	0.544 (0.055)	0.232 (0.005)	0.282 (0.05)	0.218 (0.067)	0.596 (0.225)	0.998 (0.013)	0.333 (0.118)	0.805 (0.429)
Hyper-g	Complexity(2)	0.146 (0.023)	0.224 (0.009)	0.166 (0.006)	0.195 (0.031)	0.279 (0.006)	0.075 (0.007)	0.544 (0.055)	0.232 (0.005)	0.283 (0.051)	0.22 (0.07)	0.644 (0.179)	0.999 (0.008)	0.333 (0.106)	0.823 (0.216)

Table S5: Average Mean Interval Score for predictions using various techniques for all datasets averaged over 100 train-test splits; Numbers in brackets represent standard deviation over 100 train-test splits

Parameter prior	$P(\mathcal{M}_\gamma)$	College	Tmax-Bias Correction	Tmin-Bias Correction	Bike Sharing Daily	Bike Sharing Hourly	SML 2010	Diabetes	Superconducitivity	Ozone	Boston Housing	Nutrimouse	multidrug	NIR	Liver
$g = \sqrt{n}$	BB$(1,1)$	2.2 (0.227)	0.711 (0.019)	0.546 (0.015)	38.038 (5.529)	5.247 (0.072)	3.62 (0.154)	243.262 (12.529)	2.985 (0.054)	1.985 (0.213)	19.845 (3.711)	11.699 (0.872)	17.063 (3.378)	3.897 (0.565)	49.897 (14.894)
$g = \sqrt{n}$	BB$(1, b_{SDM})$	2.201 (0.226)	0.711 (0.019)	0.546 (0.015)	38.048 (5.554)	5.248 (0.072)	3.62 (0.153)	243.761 (12.482)	2.984 (0.054)	1.987 (0.216)	20.195 (3.906)	11.515 (1.087)	16.9 (3.207)	3.896 (0.555)	50.512 (12.012)
$g = \sqrt{n}$	BB$(1, b_{EB})$	2.202 (0.228)	0.711 (0.019)	0.546 (0.015)	38.056 (5.592)	5.247 (0.072)	3.611 (0.158)	243.549 (12.913)	2.985 (0.054)	1.984 (0.215)	19.89 (3.864)	11.726 (1.552)	16.754 (2.866)	3.933 (0.644)	50.933 (12.999)
Hyper-g	BB$(1,1)$	2.171 (0.27)	0.713 (0.02)	0.545 (0.016)	38.126 (6.085)	5.255 (0.073)	3.642 (0.232)	244.007 (14.093)	2.989 (0.056)	1.992 (0.247)	19.889 (4.43)	10.693 (2.161)	16.913 (2.972)	3.889 (1.081)	49.971 (14.028)
EB-local	BB$(1,1)$	2.169 (0.268)	0.713 (0.02)	0.545 (0.016)	38.135 (6.14)	5.256 (0.074)	3.643 (0.235)	243.333 (13.824)	2.989 (0.056)	1.998 (0.253)	19.976 (4.575)	10.669 (2.351)	17.203 (4.003)	3.97 (1.302)	51.391 (18.202)
EB-local	BB$(1, b_{EB})$	2.172 (0.27)	0.713 (0.02)	0.545 (0.016)	38.13 (6.094)	5.255 (0.074)	3.644 (0.235)	244.144 (13.509)	2.99 (0.056)	2.003 (0.252)	19.88 (4.583)	10.386 (2.628)	17.143 (4.019)	3.939 (1.066)	49.633 (16.974)
Hyper-g	BB$(1, b_{EB})$	2.17 (0.268)	0.713 (0.02)	0.545 (0.016)	38.134 (6.035)	5.254 (0.075)	3.644 (0.233)	244.431 (12.88)	2.99 (0.057)	2 (0.251)	19.921 (4.54)	10.359 (1.778)	16.939 (3.483)	3.894 (1.147)	52.25 (18.827)
EB-local	BB$(1, b_{SDM})$	2.17 (0.268)	0.713 (0.02)	0.545 (0.016)	38.195 (6.118)	5.254 (0.073)	3.646 (0.234)	244.231 (13.387)	2.99 (0.056)	1.993 (0.25)	20.076 (4.36)	10.623 (2.616)	17.593 (4.303)	3.963 (1.111)	52.309 (16.788)
Hyper-g	BB$(1, b_{SDM})$	2.172 (0.269)	0.713 (0.02)	0.545 (0.016)	38.101 (6.08)	5.255 (0.074)	3.645 (0.231)	243.9 (12.664)	2.99 (0.055)	1.998 (0.253)	19.861 (4.184)	10.575 (2.155)	16.95 (3.286)	3.9 (1.084)	51.86 (19.041)
$g = \sqrt{n}$	Ber(θ_{SDM})	2.197 (0.226)	0.71 (0.019)	0.546 (0.015)	38.209 (5.422)	5.252 (0.07)	3.646 (0.152)	243.056 (12.186)	2.99 (0.055)	1.991 (0.219)	21.728 (4.308)	11.488 (1.159)	17.288 (4.321)	4.141 (0.545)	49.402 (13.041)
$g = \sqrt{n}$	Ber(θ_{EB})	2.2 (0.225)	0.711 (0.019)	0.546 (0.015)	38.072 (5.462)	5.25 (0.071)	3.637 (0.15)	248.373 (17.237)	2.986 (0.054)	1.979 (0.213)	19.273 (3.583)	11.793 (1.727)	17.413 (3.972)	4.023 (0.622)	50.369 (17.719)
EB-local	Ber(θ_{EB})	2.172 (0.27)	0.713 (0.02)	0.545 (0.016)	38.212 (6.172)	5.256 (0.073)	3.653 (0.231)	248.966 (17.38)	2.991 (0.056)	1.981 (0.252)	19.109 (4.208)	10.4 (2.539)	17.79 (5.306)	3.992 (1.073)	58.569 (30.279)
Hyper-g	Ber(θ_{EB})	2.17 (0.269)	0.713 (0.02)	0.545 (0.016)	38.118 (6.087)	5.256 (0.074)	3.656 (0.234)	249.086 (16.593)	2.991 (0.057)	1.983 (0.249)	19.087 (4.206)	10.491 (1.931)	18.021 (6.735)	3.916 (1.011)	59.275 (29.751)
Hyper-g	Ber(θ_{SDM})	2.173 (0.268)	0.712 (0.02)	0.545 (0.016)	38.349 (6.031)	5.257 (0.073)	3.666 (0.233)	243.399 (13.206)	2.995 (0.056)	1.998 (0.251)	21.639 (4.928)	10.588 (2.641)	17.514 (4.795)	3.911 (0.968)	52.241 (17.626)
EB-local	Ber(θ_{SDM})	2.173 (0.27)	0.712 (0.02)	0.545 (0.016)	38.25 (6.036)	5.257 (0.075)	3.667 (0.238)	243.314 (13.299)	2.994 (0.056)	1.996 (0.254)	21.489 (5.083)	10.801 (3.528)	17.78 (5.278)	4.011 (1.108)	54.697 (23.818)
$g = \sqrt{n}$	Uniform	2.198 (0.225)	0.71 (0.019)	0.546 (0.015)	38.098 (5.48)	5.25 (0.071)	3.638 (0.148)	248.262 (17.871)	2.985 (0.055)	1.982 (0.217)	19.273 (3.621)	15.614 (9.982)	26.009 (13.58)	3.922 (0.766)	55.582 (24.191)
Hyper-g	Uniform	2.171 (0.267)	0.713 (0.02)	0.545 (0.016)	38.102 (6.109)	5.255 (0.074)	3.653 (0.237)	248.876 (16.895)	2.992 (0.055)	1.984 (0.251)	18.994 (4.171)	19.913 (14.005)	28.311 (26.019)	4.085 (1.241)	67.612 (36.888)
EB-local	Uniform	2.17 (0.268)	0.713 (0.02)	0.545 (0.016)	38.132 (6.151)	5.255 (0.074)	3.657 (0.233)	248.799 (17.463)	2.991 (0.056)	1.978 (0.249)	18.959 (4.055)	28.6 (24.734)	33.044 (25.819)	4.338 (1.421)	68.942 (34.534)
$g = \sqrt{n}$	Complexity(1)	2.211 (0.227)	0.71 (0.019)	0.547 (0.015)	38.883 (5.485)	5.252 (0.072)	3.675 (0.147)	245.616 (10.13)	2.992 (0.054)	2.02 (0.229)	22.938 (4.954)	11.885 (1.709)	16.698 (3.125)	4.122 (0.625)	52.243 (14.754)
EB-local	Complexity(1)	2.179 (0.268)	0.713 (0.02)	0.547 (0.016)	38.867 (6.028)	5.254 (0.072)	3.712 (0.244)	246.685 (12.127)	2.998 (0.056)	2.02 (0.267)	22.602 (5.211)	10.504 (2.447)	17.178 (4.214)	4.078 (1.353)	55.215 (22.201)
Hyper-g	Complexity(1)	2.179 (0.266)	0.712 (0.02)	0.547 (0.016)	38.893 (6.094)	5.254 (0.073)	3.708 (0.241)	246.735 (12.381)	2.999 (0.054)	2.019 (0.256)	22.682 (5.472)	10.584 (1.68)	16.5 (2.658)	4.032 (1.116)	55.065 (21.51)
$g = \sqrt{n}$	Complexity(2)	2.237 (0.22)	0.71 (0.018)	0.549 (0.015)	39.838 (5.64)	5.248 (0.071)	3.715 (0.151)	248.406 (11.031)	3.001 (0.054)	2.084 (0.251)	24.059 (4.981)	14.167 (2.297)	16.065 (1.505)	5.261 (0.945)	72.857 (31.807)
EB-local	Complexity(2)	2.204 (0.264)	0.712 (0.02)	0.548 (0.016)	39.764 (6.316)	5.251 (0.072)	3.765 (0.243)	249.215 (12.787)	3.006 (0.055)	2.064 (0.285)	23.815 (5.746)	12.933 (2.636)	16.055 (1.521)	5.197 (1.571)	69.18 (31.614)
Hyper-g	Complexity(2)	2.2 (0.263)	0.712 (0.02)	0.548 (0.016)	39.837 (6.323)	5.251 (0.072)	3.77 (0.249)	249.19 (12.751)	3.006 (0.057)	2.065 (0.288)	24 (5.734)	13.851 (2.731)	16.156 (1.652)	5 (1.135)	69.718 (30.77)

Table S6: Average model size for predictions using various techniques for all datasets averaged over 100 train-test splits; Numbers in brackets represent standard deviation over 100 train-test splits

Parameter prior	$P(\mathcal{M}_\gamma)$	College	Tmax-Bias Correction	Tmin-Bias Correction	Bike Sharing Daily	Bike Sharing Hourly	SML 2010	Diabetes	Superconducitivity	Ozone	Boston Housing	Nutrimouse	multidrug	NIR	Liver
$g = \sqrt{n}$	BB(1, 1)	9.03 (0.58)	19.78 (0.28)	21.1 (0.29)	21.85 (0.96)	25.33 (0.91)	19.55 (0.53)	11.5 (1.66)	77.32 (0.93)	12.13 (1.43)	38.61 (3.38)	7.96 (1.24)	5.72 (2.74)	16.27 (1.71)	4.76 (1.49)
$g = \sqrt{n}$	BB(1, b_{SDM})	8.97 (0.53)	19.21 (0.27)	20.57 (0.41)	20.33 (0.88)	24.02 (0.82)	18.6 (0.54)	10.31 (1.54)	72.09 (1.39)	11.12 (1.14)	34.34 (2.88)	6.53 (0.91)	4.5 (2.11)	14.57 (1.54)	4.48 (1.29)
$g = \sqrt{n}$	BB(1, b_{EB})	8.93 (0.63)	21.67 (0.31)	21.86 (0.04)	23.51 (1.93)	25.63 (1.02)	21.78 (0.94)	10.07 (1.59)	79.71 (0.44)	10.81 (1.32)	37.33 (3.37)	4.92 (0.66)	4.8 (2.29)	14.76 (1.42)	4.72 (1.57)
Hyper-g	BB(1, 1)	6.79 (0.43)	17.78 (0.36)	17.52 (1.39)	17.69 (1.01)	20.58 (0.77)	15.93 (0.72)	9.08 (1.51)	71.14 (1.96)	8.63 (1.2)	31.39 (3.28)	6.8 (1.7)	5.24 (2.98)	13.8 (1.62)	4.49 (1.3)
EB-local	BB(1, 1)	6.81 (0.44)	17.77 (0.35)	17.57 (1.4)	17.67 (1.02)	20.64 (0.8)	15.92 (0.71)	9.27 (1.55)	71.41 (2.16)	8.58 (1.24)	31.28 (2.98)	7.26 (1.79)	5.78 (2.76)	13.88 (1.54)	4.75 (1.27)
EB-local	BB(1, b_{EB})	6.68 (0.44)	17.89 (0.39)	18.74 (2.12)	17.67 (1.08)	20.64 (0.83)	15.96 (0.71)	8.11 (1.45)	72.82 (3.32)	7.96 (1.12)	31.02 (3.32)	4.93 (1)	5.11 (2.61)	13.04 (1.76)	4.59 (1.25)
Hyper-g	BB(1, b_{EB})	6.69 (0.43)	17.92 (0.4)	19.25 (2.24)	17.62 (1.1)	20.59 (0.79)	15.98 (0.74)	7.97 (1.48)	73.05 (3.28)	7.92 (1.06)	30.81 (2.88)	4.81 (0.95)	3.99 (2.18)	12.91 (1.56)	4.4 (1.29)
EB-local	BB(1, b_{SDM})	6.78 (0.44)	17.56 (0.36)	16.73 (1.27)	17.1 (0.97)	20.17 (0.73)	15.66 (0.68)	8.35 (1.42)	66.68 (1.62)	8.08 (1.07)	28.95 (2.77)	6.31 (1.68)	5.15 (2.78)	12.82 (1.59)	4.62 (1.27)
Hyper-g	BB(1, b_{SDM})	6.78 (0.46)	17.57 (0.36)	16.71 (1.31)	17.1 (0.96)	20.21 (0.71)	15.69 (0.68)	8.35 (1.27)	66.77 (1.63)	8.15 (1.04)	29.35 (3.2)	5.91 (1.31)	4.45 (2.64)	12.67 (1.58)	4.14 (1.3)
$g = \sqrt{n}$	Ber(θ_{SDM})	8.42 (0.31)	17.19 (0.32)	16.24 (0.76)	15.73 (0.62)	19.79 (0.54)	15.23 (0.4)	9.3 (0.76)	57.84 (1.22)	9.67 (0.62)	20.12 (1.66)	7.43 (0.55)	6.84 (1.42)	11.26 (0.72)	5.56 (1.41)
$g = \sqrt{n}$	Ber(θ_{EB})	8.63 (0.29)	17.7 (0.27)	17.76 (0.66)	18.51 (0.59)	22.28 (0.6)	16.42 (0.41)	23.56 (1.03)	66.23 (1.06)	18.12 (0.7)	45.95 (1.55)	3.96 (0.51)	7.38 (2.06)	12.43 (1.34)	7.4 (2.48)
EB-local	Ber(θ_{EB})	7.11 (0.36)	16.83 (0.36)	14.75 (0.79)	16.65 (0.74)	19.74 (0.52)	15.02 (0.5)	23.88 (1.11)	62.68 (1.11)	15.04 (0.81)	40.71 (2.21)	4.49 (1.23)	7.6 (1.99)	12.22 (1.41)	6.48 (2.04)
Hyper-g	Ber(θ_{EB})	7.09 (0.37)	16.84 (0.37)	14.74 (0.79)	16.65 (0.71)	19.76 (0.54)	15.03 (0.51)	23.88 (1.2)	62.64 (1.15)	15.01 (0.9)	40.76 (2.05)	4.22 (0.71)	6.56 (2.31)	12.21 (1.34)	5.9 (1.94)
Hyper-g	Ber(θ_{SDM})	6.98 (0.36)	16.43 (0.41)	13.58 (0.64)	14.63 (0.75)	18.33 (0.41)	14.39 (0.42)	8.27 (0.79)	54.9 (1.88)	8.05 (0.75)	19.79 (2.28)	6.94 (0.88)	5.82 (1.79)	11.14 (0.86)	5.25 (1.5)
EB-local	Ber(θ_{SDM})	6.98 (0.36)	16.43 (0.41)	13.62 (0.66)	14.67 (0.72)	18.3 (0.39)	14.39 (0.42)	8.27 (0.79)	54.87 (1.8)	8 (0.72)	19.54 (2.09)	7.24 (0.94)	6.43 (1.75)	11.22 (0.98)	5.26 (1.45)
$g = \sqrt{n}$	Uniform	8.66 (0.32)	17.71 (0.27)	17.75 (0.65)	18.47 (0.58)	22.24 (0.64)	16.42 (0.43)	23.55 (0.94)	66.25 (1.14)	18.11 (0.74)	46.08 (1.49)	18.63 (4.02)	14 (7.18)	25.26 (3.15)	7.67 (2.79)
Hyper-g	Uniform	7.1 (0.37)	16.84 (0.36)	14.74 (0.8)	16.67 (0.7)	19.78 (0.55)	15.03 (0.49)	23.88 (1.07)	62.65 (1.12)	15.03 (0.84)	40.78 (1.91)	16.01 (4.09)	13.17 (7.16)	20.17 (2.35)	6.75 (2.25)
EB-local	Uniform	7.09 (0.38)	16.83 (0.38)	14.76 (0.8)	16.71 (0.71)	19.74 (0.55)	15 (0.49)	23.98 (1.15)	62.61 (1.05)	15.01 (0.84)	40.91 (1.99)	16.25 (3.91)	13.98 (6.92)	20.21 (3.11)	6.57 (2.4)
$g = \sqrt{n}$	Complexity(1)	5.86 (0.3)	15.78 (0.45)	12.52 (0.5)	12.01 (0.74)	17.65 (0.39)	13.23 (0.34)	4.96 (0.54)	50.74 (1.89)	5.77 (0.33)	12.17 (1.34)	3.25 (0.24)	2.4 (0.53)	7.37 (0.5)	3.25 (0.65)
EB-local	Complexity(1)	5.54 (0.34)	15.21 (0.44)	11.49 (0.51)	11.8 (0.84)	17.02 (0.43)	13.27 (0.38)	4.49 (0.56)	48.19 (2.41)	5.47 (0.27)	12.76 (1.58)	3.38 (0.29)	2.47 (0.56)	7.9 (0.91)	3.29 (0.63)
Hyper-g	Complexity(1)	5.53 (0.35)	15.22 (0.44)	11.49 (0.52)	11.79 (0.86)	17.02 (0.44)	13.26 (0.37)	4.49 (0.58)	47.62 (2.39)	5.46 (0.32)	12.81 (1.58)	3.27 (0.24)	2.19 (0.49)	7.61 (0.8)	3.11 (0.6)
$g = \sqrt{n}$	Complexity(2)	4.67 (0.42)	14.45 (0.34)	10.37 (0.5)	9.28 (0.35)	15.86 (0.72)	11.56 (0.6)	3.11 (0.15)	41.6 (1.91)	4.61 (0.3)	6.57 (0.51)	1.68 (0.19)	1.01 (0.03)	4.21 (0.61)	1.44 (0.39)
EB-local	Complexity(2)	4.68 (0.47)	14.06 (0.49)	9.77 (0.48)	9.4 (0.44)	14.88 (1.02)	12.17 (0.54)	3.09 (0.14)	40.81 (1.8)	4.69 (0.32)	7.03 (0.85)	1.93 (0.2)	1.01 (0.06)	4.56 (0.88)	1.66 (0.36)
Hyper-g	Complexity(2)	4.68 (0.47)	13.99 (0.54)	9.76 (0.48)	9.41 (0.46)	14.9 (0.98)	12.16 (0.52)	3.08 (0.15)	41.08 (1.89)	4.68 (0.33)	7.08 (0.87)	1.75 (0.26)	1.01 (0.04)	4.56 (0.98)	1.53 (0.39)

Table S7: Average computation time (in secs) for various techniques averaged over 100 bootstrapped samples; Numbers in brackets represent standard deviation over 100 bootstrapped samples

Parameter prior	$P(\mathcal{M}_\gamma)$	College	Tmax-Bias Correction	Tmin-Bias Correction	Bike Sharing Daily	Bike Sharing Hourly	SML 2010	Diabetes	Superconducitivity	Ozone	Boston Housing	Nutrimouse	multidrug	NIR	Liver
$g = \sqrt{n}$	BB(1, 1)	0.032 (0.002)	0.107 (0.004)	0.186 (0.049)	0.291 (0.087)	0.244 (0.074)	0.172 (0.016)	0.123 (0.012)	0.736 (0.144)	0.079 (0.006)	0.513 (0.151)	0.193 (0.018)	0.492 (0.172)	0.322 (0.029)	1.834 (0.481)
$g = \sqrt{n}$	BB(1, b_{SDM})	0.033 (0.002)	0.106 (0.004)	0.183 (0.048)	0.283 (0.072)	0.232 (0.071)	0.17 (0.014)	0.116 (0.01)	0.689 (0.13)	0.076 (0.006)	0.448 (0.117)	0.176 (0.015)	0.484 (0.176)	0.303 (0.024)	1.805 (0.445)
$g = \sqrt{n}$	BB(1, b_{EB})	0.102 (0.006)	0.345 (0.014)	0.646 (0.171)	0.915 (0.355)	0.744 (0.222)	0.564 (0.049)	0.372 (0.034)	2.15 (0.403)	0.227 (0.018)	1.512 (0.397)	0.498 (0.029)	1.426 (0.49)	0.906 (0.051)	5.429 (1.397)
Hyper-g	BB(1, 1)	0.106 (0.02)	0.747 (0.025)	1.036 (0.111)	0.963 (0.13)	2.091 (0.171)	0.413 (0.02)	0.294 (0.027)	3.446 (0.231)	0.24 (0.024)	1.18 (0.186)	0.397 (0.136)	0.522 (0.176)	0.59 (0.044)	1.835 (0.444)
EB-local	BB(1, 1)	0.026 (0.002)	0.103 (0.004)	0.186 (0.05)	0.226 (0.066)	0.206 (0.063)	0.159 (0.016)	0.113 (0.011)	0.613 (0.117)	0.055 (0.004)	0.377 (0.099)	0.18 (0.03)	0.469 (0.172)	0.25 (0.018)	1.744 (0.425)
EB-local	BB(1, b_{EB})	0.079 (0.005)	0.309 (0.013)	0.573 (0.156)	0.685 (0.177)	0.607 (0.181)	0.478 (0.039)	0.332 (0.033)	1.857 (0.344)	0.18 (0.013)	1.116 (0.29)	0.513 (0.06)	1.428 (0.493)	0.769 (0.043)	5.166 (1.258)
Hyper-g	BB(1, b_{EB})	0.32 (0.061)	2.234 (0.066)	3.23 (0.372)	2.937 (0.438)	6.232 (0.49)	1.248 (0.049)	0.857 (0.084)	10.312 (0.676)	0.717 (0.069)	3.5 (0.513)	0.942 (0.214)	1.608 (0.548)	1.742 (0.116)	5.433 (1.266)
EB-local	BB(1, b_{SDM})	0.026 (0.002)	0.102 (0.005)	0.186 (0.048)	0.228 (0.167)	0.203 (0.06)	0.158 (0.018)	0.107 (0.009)	0.603 (0.112)	0.054 (0.004)	0.349 (0.093)	0.164 (0.025)	0.477 (0.177)	0.245 (0.02)	1.735 (0.423)
Hyper-g	BB(1, b_{SDM})	0.107 (0.021)	0.745 (0.021)	1.043 (0.107)	0.95 (0.137)	2.082 (0.154)	0.411 (0.021)	0.288 (0.027)	3.436 (0.229)	0.236 (0.024)	1.139 (0.176)	0.351 (0.151)	0.515 (0.193)	0.574 (0.047)	1.832 (0.441)
$g = \sqrt{n}$	Ber(θ_{SDM})	0.028 (0.001)	0.097 (0.004)	0.176 (0.045)	0.21 (0.094)	0.197 (0.059)	0.145 (0.014)	0.109 (0.005)	0.587 (0.11)	0.065 (0.004)	0.288 (0.071)	0.217 (0.019)	0.527 (0.197)	0.347 (0.031)	1.859 (0.469)
$g = \sqrt{n}$	Ber(θ_{EB})	0.084 (0.004)	0.303 (0.01)	0.552 (0.138)	0.792 (0.35)	0.669 (0.204)	0.489 (0.042)	0.607 (0.038)	2.245 (0.42)	0.325 (0.02)	2.183 (0.536)	0.697 (0.045)	1.604 (0.555)	1.057 (0.067)	5.524 (1.42)
EB-local	Ber(θ_{EB})	0.07 (0.007)	0.288 (0.015)	0.51 (0.134)	0.607 (0.157)	0.587 (0.183)	0.441 (0.04)	0.579 (0.045)	1.895 (0.35)	0.244 (0.022)	1.601 (0.412)	0.611 (0.07)	1.552 (0.535)	0.823 (0.048)	5.25 (1.257)
Hyper-g	Ber(θ_{EB})	0.308 (0.06)	2.212 (0.061)	3.116 (0.303)	2.875 (0.78)	6.194 (0.494)	1.207 (0.054)	1.192 (0.07)	10.44 (0.713)	0.923 (0.065)	4.126 (0.572)	1.298 (0.327)	1.742 (0.556)	1.815 (0.123)	5.52 (1.292)
Hyper-g	Ber(θ_{SDM})	0.103 (0.02)	0.747 (0.023)	1.046 (0.099)	0.865 (0.127)	2.088 (0.167)	0.391 (0.019)	0.277 (0.022)	3.39 (0.23)	0.248 (0.022)	1 (0.149)	0.415 (0.11)	0.551 (0.17)	0.609 (0.05)	1.857 (0.449)
EB-local	Ber(θ_{SDM})	0.024 (0.001)	0.091 (0.004)	0.154 (0.042)	0.201 (0.177)	0.184 (0.056)	0.133 (0.014)	0.094 (0.006)	0.571 (0.105)	0.058 (0.004)	0.259 (0.067)	0.202 (0.029)	0.491 (0.175)	0.273 (0.022)	1.765 (0.42)
$g = \sqrt{n}$	Uniform	0.027 (0.001)	0.101 (0.024)	0.183 (0.06)	0.244 (0.164)	0.221 (0.076)	0.158 (0.034)	0.241 (0.036)	0.764 (0.157)	0.122 (0.026)	0.837 (0.218)	0.221 (0.02)	0.518 (0.182)	0.346 (0.031)	1.825 (0.46)
Hyper-g	Uniform	0.103 (0.021)	0.738 (0.022)	1.045 (0.098)	0.96 (0.328)	2.066 (0.166)	0.392 (0.021)	0.437 (0.024)	3.512 (0.232)	0.346 (0.035)	1.461 (0.212)	0.437 (0.125)	0.568 (0.201)	0.605 (0.045)	1.821 (0.416)
EB-local	Uniform	0.023 (0.002)	0.094 (0.025)	0.164 (0.057)	0.223 (0.115)	0.192 (0.07)	0.14 (0.035)	0.233 (0.085)	0.638 (0.134)	0.097 (0.027)	0.618 (0.211)	0.203 (0.046)	0.507 (0.199)	0.278 (0.071)	1.771 (0.49)
$g = \sqrt{n}$	Complexity(1)	0.022 (0.001)	0.093 (0.004)	0.152 (0.039)	0.178 (0.124)	0.187 (0.056)	0.13 (0.012)	0.082 (0.004)	0.549 (0.108)	0.046 (0.002)	0.193 (0.048)	0.111 (0.007)	0.404 (0.143)	0.209 (0.014)	1.692 (0.416)
EB-local	Complexity(1)	0.023 (0.002)	0.09 (0.004)	0.136 (0.037)	0.17 (0.067)	0.178 (0.054)	0.128 (0.013)	0.074 (0.004)	0.541 (0.106)	0.051 (0.002)	0.19 (0.048)	0.116 (0.006)	0.384 (0.137)	0.21 (0.012)	1.679 (0.405)
Hyper-g	Complexity(1)	0.113 (0.022)	0.776 (0.026)	1.066 (0.097)	0.846 (0.125)	2.191 (0.154)	0.407 (0.024)	0.23 (0.022)	3.394 (0.225)	0.225 (0.02)	0.838 (0.125)	0.207 (0.03)	0.439 (0.16)	0.498 (0.043)	1.735 (0.404)
$g = \sqrt{n}$	Complexity(2)	0.022 (0.002)	0.086 (0.004)	0.129 (0.033)	0.142 (0.048)	0.17 (0.052)	0.121 (0.012)	0.069 (0.003)	0.507 (0.099)	0.052 (0.002)	0.131 (0.031)	0.106 (0.006)	0.34 (0.123)	0.187 (0.012)	1.621 (0.388)
EB-local	Complexity(2)	0.024 (0.002)	0.088 (0.004)	0.135 (0.033)	0.666 (5.234)	0.171 (0.051)	0.133 (0.013)	0.074 (0.003)	0.493 (0.096)	0.047 (0.002)	0.141 (0.032)	0.102 (0.006)	0.348 (0.127)	0.187 (0.015)	1.631 (0.398)
Hyper-g	Complexity(2)	0.131 (0.026)	0.786 (0.023)	1.124 (0.105)	0.811 (0.123)	2.239 (0.171)	0.421 (0.025)	0.223 (0.021)	3.347 (0.216)	0.254 (0.022)	0.667 (0.101)	0.159 (0.027)	0.35 (0.128)	0.372 (0.069)	1.665 (0.402)

2 Data generating models for all datasets

The following section provides variables included in the data generating models for each of the datasets along with their coefficients and standard error and summary statistic of `lm` fit. The dataset can be made available from authors upon request.

College

	Dependent variable:
	`log(Apps)`
V4	1.005^{***}
	(0.021)
V5	-0.102^{***}
	(0.021)
V6	0.081^{***}
	(0.026)
V7	0.096^{***}
	(0.020)
V10	0.040^{**}
	(0.018)
V14	0.059^{***}
	(0.020)
V15	0.063^{***}
	(0.018)
Constant	-0.000
	(0.014)
Observations	777
R^2	0.866
Adjusted R^2	0.865
Residual Std. Error	0.395 (df = 769)
F Statistic	709.227^{***} (df = 7; 769)
Note:	*p<0.1; **p<0.05; ***p<0.01

Bias Correction - Tmax

	Dependent variable:
	Next_Tmax
V1	0.041***
	(0.002)
V3	0.031***
	(0.004)
V5	0.168***
	(0.004)
V6	0.026***
	(0.004)
V7	−0.030***
	(0.002)
V8	0.022***
	(0.002)
V9	−0.030***
	(0.003)
V10	−0.016***
	(0.004)
V11	−0.017***
	(0.004)
V12	−0.029***
	(0.003)
V14	0.022***
	(0.002)
V15	−0.005***
	(0.002)
V17	−0.006***
	(0.002)
V18	−0.013***
	(0.002)
V19	−0.028***
	(0.003)
V20	0.028***
	(0.003)
V21	0.005***
	(0.002)
Constant	−0.000
	(0.002)
Observations	7,590
R^2	0.781
Adjusted R^2	0.780
Residual Std. Error	0.135 (df = 7572)
F Statistic	1,587.114*** (df = 17; 7572)
Note:	*p<0.1; **p<0.05; ***p<0.01

Bias Correction - Tmin

	Dependent variable:
	Next_Tmin
V1	0.006***
	(0.002)
V2	0.060***
	(0.002)
V3	0.029***
	(0.003)
V4	0.004**
	(0.002)
V5	0.027***
	(0.003)
V6	0.161***
	(0.003)
V7	0.005***
	(0.001)
V8	0.004**
	(0.002)
V9	−0.014***
	(0.002)
V10	0.009***
	(0.003)
V11	−0.007***
	(0.002)
V13	−0.005***
	(0.001)
V14	−0.006***
	(0.001)
V15	0.005***
	(0.001)
V16	−0.008***
	(0.001)
V17	−0.004***
	(0.001)
V18	−0.005***
	(0.001)
V19	−0.044***
	(0.002)
V20	0.035***
	(0.002)
V21	0.004***
	(0.001)
Constant	0.000
	(0.001)
Observations	7,590
R^2	0.837
Adjusted R^2	0.837
Residual Std. Error	0.107 (df = 7569)
F Statistic	1,950.268*** (df = 20; 7569)
Note:	*p<0.1; **p<0.05; ***p<0.01

Bike Sharing - daily

	Dependent variable:
	$(\texttt{cnt})^{1/2}$
V1Summer	9.309***
	(0.919)
V1Fall	7.470***
	(1.250)
V1Winter	13.065***
	(0.830)
V22012	15.017***
	(0.473)
V33	3.158***
	(0.902)
V35	2.383**
	(1.028)
V37	−3.252***
	(1.056)
V39	5.054***
	(0.980)
V310	2.448**
	(1.032)
V4Holiday	−6.515***
	(1.404)
V50	−2.754***
	(0.670)
V6Moderate	−3.285***
	(0.625)
V6Bad	−19.782***
	(1.600)
V7	7.862***
	(0.455)
V9	−1.938***
	(0.330)
V10	−1.831***
	(0.255)
Constant	−13.520***
	(0.792)
Observations	731
R^2	0.844
Adjusted R^2	0.840
Residual Std. Error	6.295 (df = 714)
F Statistic	241.234*** (df = 16; 714)
Note:	*p<0.1; **p<0.05; ***p<0.01

Bike Sharing - Hourly

	Dependent variable:
	$(\texttt{cnt})^{1/3}$
V4LateNight	-2.926^{***}
	(0.025)
V9	0.569^{***}
	(0.015)
V4Evening	1.125^{***}
	(0.027)
V10	-0.215^{***}
	(0.010)
V1Spring	-0.515^{***}
	(0.033)
V22012	0.767^{***}
	(0.016)
V7Bad	-0.694^{***}
	(0.032)
V4Night	-0.316^{***}
	(0.024)
V36	-0.231^{***}
	(0.036)
V38	-0.244^{***}
	(0.035)
V37	-0.462^{***}
	(0.037)
V312	-0.112^{***}
	(0.033)
V4EarlyMorning	-0.102^{***}
	(0.030)
V1Winter	0.300^{***}
	(0.031)
V5Holiday	-0.279^{***}
	(0.049)
V65	0.168^{***}
	(0.024)
V311	-0.159^{***}
	(0.038)
V66	0.122^{***}
	(0.024)
V34	-0.174^{***}
	(0.035)
Constant	0.464^{***}
	(0.027)
Observations	17,379
R^2	0.723
Adjusted R^2	0.723
Residual Std. Error	1.069 (df = 17359)
F Statistic	$2{,}389.817^{***}$ (df = 19; 17359)
Note:	*p<0.1; **p<0.05; ***p<0.01

SML2010

	Dependent variable:
	Temperature_Comedor_Sensor
V2	-0.351^{***}
	(0.045)
V3	0.394^{***}
	(0.039)
V5	-0.902^{***}
	(0.049)
V7	0.356^{***}
	(0.105)
V8	-0.109^{***}
	(0.020)
V9	-0.104^{***}
	(0.028)
V11	0.197^{***}
	(0.042)
V13	-0.394^{***}
	(0.134)
V14	-1.116^{***}
	(0.114)
V15	3.174^{***}
	(0.036)
V16	1.244^{***}
	(0.057)
V172	0.926^{***}
	(0.062)
V173	-0.329^{***}
	(0.062)
V174	0.206^{***}
	(0.062)
V176	0.363^{***}
	(0.062)
V177	0.921^{***}
	(0.063)
Constant	-0.285^{***}
	(0.035)
Observations	1,373
R^2	0.931
Adjusted R^2	0.930
Residual Std. Error	0.676 (df = 1356)
F Statistic	$1{,}136.073^{***}$ (df = 16; 1356)
Note:	*p<0.1; **p<0.05; ***p<0.01

Diabetes

	Dependent variable:
	Y
V3	27.175^{***}
	(3.097)
V9	22.736^{***}
	(3.120)
V4	11.775^{***}
	(2.929)
V7	-9.129^{***}
	(2.889)
V37	6.836^{**}
	(2.654)
V19	5.874^{**}
	(2.627)
V22	6.437^{**}
	(2.622)
Constant	-0.000
	(2.569)
Observations	442
R^2	0.517
Adjusted R^2	0.509
Residual Std. Error	54.001 (df = 434)
F Statistic	66.400^{***} (df = 7; 434)
Note:	*p<0.1; **p<0.05; ***p<0.01

Superconductivity

	Dependent variable:
	$(\texttt{critical\_temp})^{1/3}$
V71	0.544***
	(0.016)
V28	0.622***
	(0.045)
V7	1.082***
	(0.029)
V31	0.167***
	(0.024)
V18	1.046***
	(0.050)
V27	−0.680***
	(0.032)
V30	−0.463***
	(0.038)
V74	−0.058***
	(0.010)
V6	−0.234***
	(0.028)
V20	−0.826***
	(0.045)
V57	0.256***
	(0.016)
V33	0.167***
	(0.020)
V36	0.129***
	(0.023)
V46	−0.321***
	(0.012)
V8	0.107***
	(0.009)
V32	−0.200***
	(0.015)
V13	−0.173***
	(0.012)
V54	−0.128***
	(0.013)
V65	−0.118***
	(0.019)
V55	0.305***
	(0.030)
V37	−0.404***
	(0.019)
V64	0.029**
	(0.015)
V17	0.078***
	(0.014)
V69	−0.155***
	(0.015)
V3	−0.148***
	(0.012)
V53	−0.061**
	(0.027)
V9	0.120***
	(0.010)
Constant	0.000
	(0.004)
Observations	21,263
R^2	0.722
Adjusted R^2	0.721
Residual Std. Error	0.641 (df = 21235)
F Statistic	2,039.030*** (df = 27; 21235)
Note:	*p<0.1; **p<0.05; ***p<0.01

Ozone

	Dependent variable:
	upo3
V4	0.419^{***}
	(0.025)
V5	-0.205^{***}
	(0.025)
V42	-0.073^{***}
	(0.025)
V39	-0.132^{***}
	(0.025)
V25	0.138^{***}
	(0.022)
Constant	-0.000
	(0.021)
Observations	330
R^2	0.749
Adjusted R^2	0.745
Residual Std. Error	0.378 (df = 324)
F Statistic	193.259^{***} (df = 5; 324)
Note:	*p<0.1; **p<0.05; ***p<0.01

Boston Housing

	Dependent variable:
	medv
V13	−2.368***
	(0.340)
V6	4.099***
	(0.278)
V11	−1.238***
	(0.216)
V68	−0.673***
	(0.249)
V5	−1.625***
	(0.347)
V99	−5.278***
	(0.847)
V96	1.238***
	(0.241)
V7	−0.930***
	(0.310)
V12	0.501***
	(0.181)
V82	3.003***
	(0.743)
V17	−2.555***
	(0.334)
V100	1.427***
	(0.457)
V55	−1.286***
	(0.262)
V8	−3.299***
	(0.388)
V25	2.065***
	(0.396)
V48	−1.487***
	(0.286)
V85	−1.524***
	(0.584)
V39	1.629***
	(0.382)
V29	0.533**
	(0.210)
V88	−2.425***
	(0.591)
V63	1.014***
	(0.279)
V77	−2.267***
	(0.403)
V67	−2.947***
	(0.408)
Constant	0.000
	(0.155)
Observations	506
R^2	0.862
Adjusted R^2	0.856
Residual Std. Error	3.496 (df = 482)
F Statistic	131.038*** (df = 23; 482)
Note:	*p<0.1; **p<0.05; ***p<0.01

Nutrimouse

	Dependent variable:
	C16.0
V12	1.834^{***}
	(0.278)
V19	-1.306^{***}
	(0.314)
V120	1.221^{***}
	(0.278)
V90	-1.715^{***}
	(0.280)
V31	0.544^{***}
	(0.188)
V63	-0.784^{**}
	(0.341)
V115	-0.700^{***}
	(0.226)
V74	1.346^{***}
	(0.314)
V104	1.064^{***}
	(0.281)
Constant	-0.000
	(0.152)
Observations	40
R^2	0.945
Adjusted R^2	0.928
Residual Std. Error	0.958 (df = 30)
F Statistic	56.902^{***} (df = 9; 30)
Note:	*p<0.1; **p<0.05; ***p<0.01

Multidrug

	Dependent variable:
	ABCA3
V466	-1.519^{***}
	(0.333)
V276	-0.683^{**}
	(0.291)
V576	-0.843^{**}
	(0.323)
V645	-0.968^{***}
	(0.276)
V698	-1.173^{***}
	(0.293)
V802	1.207^{***}
	(0.240)
V261	-0.867^{***}
	(0.281)
V686	-0.806^{**}
	(0.329)
V805	0.971^{***}
	(0.347)
V741	0.770^{***}
	(0.285)
V771	0.762^{**}
	(0.319)
V648	1.050^{***}
	(0.319)
Constant	-0.000
	(0.209)
Observations	60
R^2	0.849
Adjusted R^2	0.810
Residual Std. Error	1.617 (df = 47)
F Statistic	22.025^{***} (df = 12; 47)
Note:	*p<0.1; **p<0.05; ***p<0.01

NIR

	Dependent variable:
	$(\texttt{Glucose})^{1/2}$
V196	0.941^{***}
	(0.123)
V11	1.374^{***}
	(0.200)
V90	3.299^{***}
	(0.251)
V122	3.829^{***}
	(0.308)
V2	-1.471^{***}
	(0.336)
V110	-0.947^{***}
	(0.131)
V116	-2.421^{***}
	(0.146)
Constant	0.000
	(0.054)
Observations	166
R^2	0.865
Adjusted R^2	0.859
Residual Std. Error	0.695 (df = 158)
F Statistic	144.403^{***} (df = 7; 158)
Note:	*p<0.1; **p<0.05; ***p<0.01

Liver

	Dependent variable:
	`Cholesterol.mg.dL.`
V2050	-8.613^{***}
	(1.717)
V2114	-3.283^{**}
	(1.324)
V2044	-10.010^{***}
	(2.053)
V1188	2.990^{**}
	(1.389)
V1011	-6.255^{***}
	(2.337)
V2001	9.624^{***}
	(3.424)
V1991	-19.357^{***}
	(7.100)
V1993	18.242^{***}
	(6.674)
Constant	-0.000
	(0.752)
Observations	64
R^2	0.844
Adjusted R^2	0.821
Residual Std. Error	6.015 (df = 55)
F Statistic	37.201^{***} (df = 8; 55)
Note:	*p<0.1; **p<0.05; ***p<0.01