**Table S6.** Statistical results of the Linear Mixed Effect models for the maps similarity values at the medium scale (Improved Fuzzy Kappa) between algorithms and their interaction with the number of records and their spatial distribution.

|  |  |  |  |
| --- | --- | --- | --- |
| **Algorithms** | **Estimate** | **z value** | **Pr(>|z|)** |
| Max vs ANN | 3.0180 | 21.0680 | **<0.01** |
| Max vs GAM | 0.2000 | 1.3960 | 0.8929 |
| Max vs GBM | 0.2337 | 1.6310 | 0.771 |
| Max vs GLM | 0.3915 | 2.7330 | 0.12 |
| Max vs RF | 0.1673 | 1.1680 | 0.9623 |
| Max vs Con | 0.5407 | 3.7750 | **<0.01** |
| ANN vs GAM | -2.8180 | -19.6720 | **<0.01** |
| ANN vs GBM | -2.7840 | -19.4370 | **<0.01** |
| ANN vs GLM | -2.6260 | -18.3350 | **<0.01** |
| ANN vs RF | -2.8510 | -19.9000 | **<0.01** |
| ANN vs Con | -2.4770 | -17.2940 | **<0.01** |
| GAM vs GBM | 0.0337 | 0.2350 | 1 |
| GAM vs GLM | 0.1915 | 1.3370 | 0.9154 |
| GAM vs RF | -0.0327 | -0.2280 | 1 |
| GAM vs Con | 0.3407 | 2.3780 | 0.2692 |
| GBM vs GLM | 0.1578 | 1.1020 | 0.9741 |
| GBM vs RF | -0.0664 | -0.4630 | 1 |
| GBM vs Con | 0.3070 | 2.1430 | 0.4146 |
| GLM vs RF | -0.2242 | -1.5650 | 0.8102 |
| GLM vs Con | 0.1492 | 1.0420 | 0.9823 |
| RF vs Con | 0.3734 | 2.6070 | 0.1643 |
| Max vs records | -0.0001 | -0.4970 | 1 |
| ANN vs records | 0.0006 | 2.7130 | 0.1261 |
| GAM vs records | 0.0001 | 0.5110 | 1 |
| GBM vs records | 0.0002 | 0.8380 | 0.9964 |
| GLM vs records | 0.0002 | 0.9470 | 0.991 |
| RF vs records | -0.0002 | -1.0330 | 0.9832 |
| Con vs records | 0.0002 | 1.0780 | 0.9775 |
| Max vs distance | 0.0000 | -0.7120 | 0.999 |
| ANN vs distance | 0.0000 | 3.4450 | **0.0138** |
| GAM vs distance | 0.0000 | -0.0940 | 1 |
| GBM vs distance | 0.0000 | -0.3930 | 1 |
| GLM vs distance | 0.0000 | 0.0990 | 1 |
| RF vs distance | 0.0000 | -0.6660 | 0.9995 |
| Con vs distance | 0.0000 | 0.4240 | 1 |

The estimates are the values as obtained in the mixed model without being *logit* back-transformed. The sign of the estimate apply for the first algorithm being compared against the second. The positive sign points to algorithms that render higher values -better fits. Max= Maxent, Con= Consensus approach. Corrected Tukey’s *P values* reported.