**Supplementary information 1.** Hyperparameters for each algorithm in the grid search.

| Classifier | Tested values | Selected values |
|------------|---------------|-----------------|
| **Xgboost** | | |
| `n_estimators`: 10, 25, 50, 100, 250, 500, 1000 | | `n_estimators`: 500 |
| `learning_rate`: 0.001, 0.01, 0.1, 0.2, 0.5 | | `learning_rate`: 0.01 |
| `max_depth`: 2, 3, 5, 10, 25, 50, 100 | | `max_depth`: 3 |
| `n_estimators`: 10, 25, 50, 100, 250, 500, 1000 | | `n_estimators`: 1000 |
| **CatBoost** | | |
| `learning_rate`: 0.001, 0.01, 0.1, 0.2, 0.5 | | `learning_rate`: 0.01 |
| `max_depth`: 2, 3, 5, 10, 25, 50, 100 | | `max_depth`: 10 |
| `n_estimators`: 10, 25, 50, 100, 250, 500, 1000 | | `n_estimators`: 250 |
| **LGBM** | | |
| `learning_rate`: 0.001, 0.01, 0.1, 0.2, 0.5 | | `learning_rate`: 0.1 |
| `max_depth`: 2, 3, 5, 10, 25, 50, 100 | | `max_depth`: 5 |

*Abbreviations: LGBM, light gradient boosting model*