**Table S1 – Mathews correlation coefficient (MCC) score for the top-performing RF approaches**

Different combinations of three types of nsSNPs are used for each of the three classification problems. RF, RF-SL, RF-SL-2F correspond to the supervised random forest classifier, self-learning random forest classifier, and self-learning random forest classifier using 2 additional features (predictions of effects from the 2-class classifiers), correspondingly.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Problem 1** | **Problem 2** | **Problem 3** |
| **Method** | **RF** | **RF-SL** | **RF** | **RF-SL** | **RF** | **RF-SL** | **RF-SL-2F** |
| **MCC** | 0.53 | 0.51 | 0.47 | 0.55 | 0.44 | 0.49 | 0.61 |