**Predicting remission following CBT for childhood anxiety disorders:**

**A machine learning approach**

**Supplementary Methods**

**Hyperparameter Tuning**

Hyperparameters tuned for logistic regression.

|  |  |
| --- | --- |
| C | Log uniform distribution (1e-1, 100) |
| Penalty | {l1, l2, elasticnet, none} |
| l1\_ratio | {0.1, 0.2, 0.5, 0.7, 0.9} |

Hyperparameters tuned for gradient boosted trees.

|  |  |
| --- | --- |
| max\_depth | Int uniform distribution (3, 30) |
| feature\_fraction | Uniform distribution(0.1, 1.0) |
| learning\_rate | Log uniform distribution (0.005, 0.6) |
| num\_leaves | (10, 300) |
| subsample | {0.6, 0.8, 1.0} |
| reg\_alpha | (0.01, 9) |
| reg\_lambda | (0.01, 9) |

Hyperparameters tuned for NODE.

|  |  |
| --- | --- |
| num\_trees | {32, 64, 128, 256, 512} |
| num\_layers | {1,2} |
| learning\_rate | {0.1, 0.01, 0.001, 0.0001} |
| batch\_size | {32, 64, 128} |

**PROBAST Details**

The data was collected for the purpose of a study, and not for the purpose of developing and validating a prognostic model. Several of the predictors involved subjective judgement or skilled training, which was done by assessors in different sites, and thereby had different levels of experience. Given that the data and outcomes were collected from a study, the outcome was not available to those assessing the predictors. Given the design of the prognostic model, the included predictors would be available at the time the model is intended to be applied.

