**Supplementary 7: Threshold Test Results**

The sensitivity of the final ensemble model to threshold values for converting predicted probabilities to binary values was tested. 81 possible threshold values were tested ranging from 0.1 to 0.9 at 0.01 increments. In each iteration, the threshold was used to convert predicted probabilities to binary values and compute accuracy for the training set and the internal testing set. Mean accuracy for the training set was 0.91 (±0.025) and mean accuracy for the testing set was 0.82 (±0.056). Differences between the training and testing sets were low for all threshold values, with a mean value of 0.090 (±0.045). These results suggest low possibility of overfitting and relatively low sensitivity of model performance to changing threshold values.

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| **Table 1:** Accuracy results for different threshold values. | | | |
| **Threshold** | **Train accuracy** | **Test accuracy** | **Difference in accuracy** |
| 0.1 | 0.80 | 0.67 | 0.13 |
| 0.11 | 0.81 | 0.67 | 0.15 |
| 0.12 | 0.84 | 0.67 | 0.17 |
| 0.13 | 0.85 | 0.67 | 0.18 |
| 0.14 | 0.86 | 0.67 | 0.19 |
| 0.15 | 0.86 | 0.67 | 0.19 |
| 0.16 | 0.87 | 0.67 | 0.20 |
| 0.17 | 0.87 | 0.71 | 0.16 |
| 0.18 | 0.87 | 0.76 | 0.11 |
| 0.19 | 0.89 | 0.76 | 0.13 |
| 0.2 | 0.89 | 0.76 | 0.13 |
| 0.21 | 0.89 | 0.81 | 0.08 |
| 0.22 | 0.91 | 0.81 | 0.10 |
| 0.23 | 0.91 | 0.86 | 0.05 |
| 0.24 | 0.91 | 0.86 | 0.05 |
| 0.25 | 0.91 | 0.86 | 0.05 |
| 0.26 | 0.91 | 0.86 | 0.05 |
| 0.27 | 0.91 | 0.86 | 0.05 |
| 0.28 | 0.91 | 0.86 | 0.05 |
| 0.29 | 0.91 | 0.86 | 0.05 |
| 0.3 | 0.92 | 0.86 | 0.06 |
| 0.31 | 0.93 | 0.81 | 0.12 |
| 0.32 | 0.93 | 0.81 | 0.12 |
| 0.33 | 0.93 | 0.81 | 0.12 |
| 0.34 | 0.93 | 0.81 | 0.12 |
| 0.35 | 0.93 | 0.81 | 0.12 |
| 0.36 | 0.93 | 0.81 | 0.12 |
| 0.37 | 0.93 | 0.81 | 0.12 |
| 0.38 | 0.93 | 0.76 | 0.17 |
| 0.39 | 0.93 | 0.76 | 0.17 |
| 0.4 | 0.93 | 0.76 | 0.17 |
| 0.41 | 0.93 | 0.81 | 0.12 |
| 0.42 | 0.93 | 0.81 | 0.12 |
| 0.43 | 0.93 | 0.81 | 0.12 |
| 0.44 | 0.93 | 0.81 | 0.12 |
| 0.45 | 0.93 | 0.81 | 0.12 |
| 0.46 | 0.93 | 0.81 | 0.12 |
| 0.47 | 0.93 | 0.81 | 0.12 |
| 0.48 | 0.93 | 0.81 | 0.12 |
| 0.49 | 0.93 | 0.81 | 0.12 |
| 0.5 | 0.93 | 0.81 | 0.12 |
| 0.51 | 0.92 | 0.81 | 0.11 |
| 0.52 | 0.92 | 0.81 | 0.11 |
| 0.53 | 0.92 | 0.81 | 0.11 |
| 0.54 | 0.92 | 0.81 | 0.11 |
| 0.55 | 0.91 | 0.81 | 0.10 |
| 0.56 | 0.91 | 0.81 | 0.10 |
| 0.57 | 0.92 | 0.81 | 0.11 |
| 0.58 | 0.92 | 0.86 | 0.06 |
| 0.59 | 0.92 | 0.86 | 0.06 |
| 0.6 | 0.92 | 0.86 | 0.06 |
| 0.61 | 0.92 | 0.86 | 0.06 |
| 0.62 | 0.92 | 0.86 | 0.06 |
| 0.63 | 0.92 | 0.86 | 0.06 |
| 0.64 | 0.92 | 0.86 | 0.06 |
| 0.65 | 0.92 | 0.86 | 0.06 |
| 0.66 | 0.91 | 0.86 | 0.05 |
| 0.67 | 0.91 | 0.86 | 0.05 |
| 0.68 | 0.91 | 0.86 | 0.05 |
| 0.69 | 0.91 | 0.86 | 0.05 |
| 0.7 | 0.91 | 0.86 | 0.05 |
| 0.71 | 0.91 | 0.86 | 0.05 |
| 0.72 | 0.91 | 0.86 | 0.05 |
| 0.73 | 0.91 | 0.86 | 0.05 |
| 0.74 | 0.91 | 0.86 | 0.05 |
| 0.75 | 0.91 | 0.86 | 0.05 |
| 0.76 | 0.91 | 0.86 | 0.05 |
| 0.77 | 0.91 | 0.86 | 0.05 |
| 0.78 | 0.91 | 0.86 | 0.05 |
| 0.79 | 0.91 | 0.86 | 0.05 |
| 0.8 | 0.91 | 0.86 | 0.05 |
| 0.81 | 0.91 | 0.86 | 0.05 |
| 0.82 | 0.91 | 0.86 | 0.05 |
| 0.83 | 0.91 | 0.86 | 0.05 |
| 0.84 | 0.91 | 0.86 | 0.05 |
| 0.85 | 0.91 | 0.86 | 0.05 |
| 0.86 | 0.91 | 0.86 | 0.05 |
| 0.87 | 0.91 | 0.86 | 0.05 |
| 0.88 | 0.91 | 0.86 | 0.05 |
| 0.89 | 0.88 | 0.86 | 0.03 |
| 0.9 | 0.88 | 0.86 | 0.03 |