1. **Baseline model**

Table 1 Before

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sensitivity** | **Specificity** | **PPV** | **NPV** | **AUC** |
| Healthy control | 0.93 | 0.95 | 0.85 | 0.98 | 0.98 |
| MCI patients | 0.79 | 0.81 | 0.84 | 0.76 | 0.87 |
| AD patients | 0.66 | 0.91 | 0.64 | 0.91 | 0.89 |

Table 1 After

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sensitivity** | **Specificity** | **PPV** | **NPV** | **AUC** |
| Healthy control | 0.93 | 0.93 | 0.82 | 0.98 | 0.98 |
| MCI patients | 0.78 | 0.79 | 0.83 | 0.75 | 0.86 |
| AD patients | 0.63 | 0.91 | 0.65 | 0.91 | 0.90 |

CM before

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Actual | Predicted | | | |
|  | Control | MCI | AZ |
| Control | 40 | 3 | 0 |
| MCI | 7 | 77 | 13 |
| AZ | 0 | 12 | 23 |

CM after

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Actual | Predicted | | | |
|  | Control | MCI | AZ |
| Control | 40 | 3 | 0 |
| MCI | 9 | 76 | 12 |
| AZ | 0 | 13 | 22 |

Shap plots for baseline models are updated

1. **Feature selection model.**

Table 2 before

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sensitivity** | **Specificity** | **PPV** | **NPV** | **AUC** |
| Healthy control | 0.95 | 0.91 | 0.77 | 0.98 | 0.98 |
| MCI patients | 0.77 | 0.86 | 0.87 | 0.75 | 0.88 |
| AD patients | 0.74 | 0.92 | 0.70 | 0.93 | 0.92 |

Table 2 after

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sensitivity** | **Specificity** | **PPV** | **NPV** | **AUC** |
| Healthy control | 0.93 | 0.92 | 0.78 | 0.98 | 0.98 |
| MCI patients | 0.71 | 0.85 | 0.85 | 0.70 | 0.90 |
| AD patients | 0.74 | 0.88 | 0.60 | 0.93 | 0.93 |

CM before

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Actual | Predicted | | | |
|  | Control | MCI | AZ |
| Control | 41 | 2 | 0 |
| MCI | 11 | 75 | 11 |
| AZ | 0 | 9 | 26 |

CM after

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Actual | Predicted | | | |
|  | Control | MCI | AZ |
| Control | 40 | 3 | 0 |
| MCI | 11 | 69 | 17 |
| AZ | 0 | 9 | 26 |