**1. 다중 클래스 분류 (Multi-Class Classification)**

|  |  |  |  |
| --- | --- | --- | --- |
| **모델** | **AUROC** | **Log Loss** | **Accuracy** |
| **MLP** | 0.9965 | 0.0688 | 0.9760 |
| **TabNet** | 0.9988 | 0.0173 | 0.9964 |
| **LightGBM** | 0.9998 | 0.1807 | 0.9992 |
| **XGBoost** | 0.9999 | 0.3641 | 0.9998 |

**2. 다중 라벨 분류 (Multi-Label Classification)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **모델** | **Hamming Loss ↓** | **Micro F1 ↑** | **Macro F1 ↑** | **Jaccard Score ↑** |
| **MLP** | 0.0356 | 0.9444 | 0.9074 | 0.9312 |
| **TabNet** | 0.0156 | 0.9761 | 0.9569 | 0.9709 |
| **LightGBM** | 0.0063 | 0.9902 | 0.9776 | 0.9880 |
| **XGBoost** | 0.0051 | 0.9921 | 0.9744 | 0.9907 |