Анализ на всех признаках

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Модель | Accuracy | AUC | Precision | Recall | F1-score | F2-score |
| RFClassifier | 0.56  (0.80±0.02,  0.83) | 0.56  (0.86±0.02,  0.76) | 0.64  (0.79±0.03,  0.69) | 0.26  (0.76±0.02,  0.62) | 0.37  (0.77±0.02,  0.65) | 0.30  (0.76±0.02,  0.63) |
| XGBRFClassifier | 0.60  (0.82±0.03,  0.83) | 0.60  (0.88±0.02,  0.81) | 0.58  (0.80±0.03,  0.62) | 0.72  (0.81±0.03,  0.78) | 0.64  (0.81±0.03,  0.69) | 0.69  (0.81±0.03,  0.74) |
| XGBoost | **0.65**  (0.82±0.02,  0.82) | **0.65**  (0.88±0.02,0.81) | **0.63**  (0.80±0.02,0.65) | **0.71**  (0.81±0.02,0.77) | **0.67**  (0.80±0.02,0.70) | **0.69**  (0.81±0.02,0.74) |
| LightGBM | 0.62  (0.81±0.02,  0.83) | 0.62  (0.88±0.02,  0.79) | 0.66  (0.79±0.02,  0.65) | 0.50  (0.79±0.02,  0.72) | 0.57  (0.79±0.02,  0.68) | 0.53  (0.79±0.02,  0.70) |
| CatBoost | 0.65  (0.82±0.03,  0.84) | 0.65  (0.88±0.02,  0.80) | 0.65  (0.80±0.02,  0.67) | 0.65  (0.81±0.02,0.74) | 0.65  (0.80±0.02,  0.70) | 0.65  (0.80±0.02,0.72) |
| LightAutoML | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 | 0.65 |

Анализ на признаках, отобранных ADD-DEL и Boruta

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Модель | Accuracy | AUC | Precision | Recall | F1-score | F2-score |
| RFClassifier | 0.57  (0.80±0.01,  0.82) | 0.57  (0.86±0.02,  0.76) | 0.67  (0.78±0.02,  0.78) | 0.27  (0.75±0.02,  0.60) | 0.38  (0.76±0.02,  0.68) | 0.31  (0.76±0.02,  0.63) |
| XGBRFClassifier | **0.61**  (0.82±0.01,  0.83) | **0.61**  (0.88±0.01,  0.81) | **0.58**  (0.79±0.05,  0.70) | **0.81**  (0.81±0.01,  0.78) | **0.68**  (0.80±0.04,  0.74) | **0.75**  (0.81±0.01,  0.76) |
| XGBoost | 0.65  (0.81±0.01,  0.83) | 0.65  (0.88±0.01,0.80) | 0.66  (0.79±0.01,0.75) | 0.61  (0.80±0.01,0.71) | 0.63  (0.79±0.01,0.73) | 0.62  (0.79±0.01,0.72) |
| LightGBM | 0.54  (0.80±0.02,  0.83) | 0.54  (0.87±0.01,  0.80) | 0.55  (0.78±0.02,  0.74) | 0.46  (0.78±0.01,  0.70) | 0.50  (0.78±0.02,  0.72) | 0.48  (0.78±0.02,  0.71) |
| CatBoost | 0.65  (0.81±0.01,  0.83) | 0.65  (0.88±0.01,  0.80) | 0.64  (079±0.01,  0.75) | 0.69  (0.80±0.02,0.71) | 0.66  (0.79±0.01,  0.73) | 0.67  (0.80±0.01,0.72) |
| LightAutoML | 0.81 | 0.81 | 0.70 | 0.81 | 0.75 | 0.78 |

Анализ на признаках, отобранных CatBoost

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Модель | Accuracy | AUC | Precision | Recall | F1-score | F2-score |
| RFClassifier | 0.56  (0.81±0.02,  0.83) | 0.56  (0.87±0.02,  0.79) | 0.64  (0.80±0.02,  0.70) | 0.29  (0.77±0.02,  0.69) | 0.37  (0.78±0.02,  0.69) | 0.33  (0.78±0.02,  0.69) |
| XGBRFClassifier | **0.60**  (0.82±0.01,  0.82) | **0.60**  (0.88±0.02,  0.82) | **0.58**  (0.80±0.02,  0.64) | **0.72**  (0.81±0.02,  0.82) | **0.64**  (0.80±0.03,  0.71) | **0.69**  (0.81±0.03,  0.77) |
| XGBoost | 0.62  (0.82±0.01,  0.82) | 0.62  (0.89±0.02,0.80) | 0.62  (0.80±0.02,0.64) | 0.63  (0.81±0.02,0.76) | 0.67  (0.80±0.02,0.70) | 0.63  (0.80±0.02,0.73) |
| LightGBM | 0.62  (0.81±0.01,  0.79) | 0.62  (0.88±0.02,  0.77) | 0.62  (0.79±0.02,  0.61) | 0.61  (0.79±0.02,  0.72) | 0.57  (0.79±0.01,  0.66) | 0.61  (0.79±0.01,  0.69) |
| CatBoost | 0.64  (0.82±0.02,  0.83) | 0.64  (0.88±0.02,  0.82) | 0.64  (0.80±0.02,  0.68) | 0.64  (0.80±0.02,0.79) | 0.65  (0.80±0.02,  0.73) | 0.63  (0.80±0.02,0.76) |
| LightAutoML | 0.83 | 0.83 | 0.73 | 0.83 | 0.77 | 0.81 |

Анализ на признаках, отобранных ADD-DEL и Boruta, без ИМТ

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Модель | Accuracy | AUC | Precision | Recall | F1-score | F2-score |
| RFClassifier | 0.59  (0.80±0.01,  0.84) | 0.59  (0.87±0.01,  0.80) | 0.69  (0.78±0.02,  0.80) | 0.31  (0.75±0.02,  0.68) | 0.43  (0.76±0.02,  0.74) | 0.35  (0.76±0.02,  0.70) |
| XGBRFClassifier | 0.57  (0.75±0.01,  0.77) | 0.57  (0.79±0.01,  0.68) | 0.60  (0.72±0.01,  0.76) | 0.45  (0.67±0.01,  0.42) | 0.52  (0.68±0.02,  0.55) | 0.48  (0.68±0.03,  0.47) |
| XGBoost | **0.59**  (0.73±0.01,  0.77) | **0.59**  (0.79±0.01,0.71) | **0.60**  (0.69±0.01,0.68) | **0.54**  (0.67±0.01,0.53) | **0.57**  (0.68±0.01,0.60) | **0.55**  (0.67±0.02,0.56) |
| LightGBM | 0.60  (0.72±0.01,  0.72) | 0.60  (0.76±0.01,  0.68) | 0.61  (0.67±0.01,  0.62) | 0.52  (0.66±0.01,  0.52) | 0.56  (0.67±0.01,  0.56) | 0.54  (0.66±0.02,  0.53) |
| CatBoost | 0.58  (0.74±0.01,  0.74) | 0.58  (0.80±0.01,  0.69) | 0.61  (0.70±0.01,  0.67) | 0.46  (0.67±0.02,0.50) | 0.52  (0.68±0.02,  0.57) | 0.48  (0.68±0.02,0.53) |
| LightAutoML | 0.75 | 0.75 | 0.62 | 0.75 | 0.68 | 0.72 |

Анализ на признаках, отобранных CatBoost, без ИМТ

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Модель | Accuracy | AUC | Precision | Recall | F1-score | F2-score |
| RFClassifier | 0.58  (0.80±0.02,  0.81) | 0.58  (0.87±0.01,  0.76) | 0.68  (0.78±0.02,  0.76) | 0.30  (0.75±0.02,  0.62) | 0.41  (0.76±0.02,  0.68) | 0.33  (0.76±0.02,  0.64) |
| XGBRFClassifier | 0.58  (0.75±0.01,  0.79) | 0.58  (0.79±0.02,  0.72) | 0.61  (0.72±0.02,  0.73) | 0.46  (0.69±0.02,  0.54) | 0.52  (0.70±0.02,  0.62) | 0.49  (0.69±0.02,  0.57) |
| XGBoost | **0.59**  (0.75±0.02,  0.77) | **0.59**  (0.78±0.02,0.70) | **0.62**  (0.71±0.02,0.69) | **0.47**  (0.69±0.02,0.51) | **0.54**  (0.69±0.02,0.59) | **0.50**  (0.69±0.02,0.54) |
| LightGBM | 0.57  (0.75±0.01,  0.78) | 0.57  (0.79±0.01,  0.71) | 0.59  (0.71±0.01,  0.74) | 0.45  (0.69±0.02,  0.52) | 0.51  (0.69±0.01,  0.61) | 0.48  (0.69±0.01,  0.55) |
| CatBoost | 0.57  (0.75±0.01,  0.79) | 0.57  (0.80±0.02,  0.72) | 0.60  (0.72±0.02,  0.75) | 0.42  (0.68±0.01,0.52) | 0.50  (0.69±0.02,  0.61) | 0.45  (0.69±0.02,0.55) |
| LightAutoML | 0.78 | 0.78 | 0.66 | 0.78 | 0.72 | 0.76 |

Анализ только на основе ИМТ

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Модель | Accuracy | AUC | Precision | Recall | F1-score | F2-score |
| RFClassifier | 0.63  (0.81±0.01,  0.82) | 0.63  (0.87±0.02,  0.79) | 0.78  (0.78±0.01,  0.71) | 0.37  (0.78±0.01,  0.71) | 0.50  (0.78±0.01,  0.71) | 0.41  (0.78±0.01,  0.71) |
| XGBRFClassifier | 0.62  (0.81±0.01,  0.82) | 0.62  (0.87±0.02,  0.79) | 0.77  (0.78±0.01,  0.72) | 0.36  (0.78±0.01,  0.71) | 0.49  (0.78±0.01,  0.71) | 0.40  (0.78±0.01,  0.71) |
| XGBoost | **0.66**  (0.80±0.01,  0.82) | **0.66**  (0.85±0.02,0.79) | **0.79**  (0.78±0.01,0.70) | **0.43**  (0.77±0.02,0.74) | **0.55**  (0.77±0.01,0.72) | **0.47**  (0.77±0.01,0.73) |
| LightGBM | 0.56  (0.79±0.01,  0.80) | 0.56  (0.85±0.02,  0.77) | 0.68  (0.76±0.01,  0.70) | 0.25  (0.76±0.01,  0.67) | 0.36  (0.76±0.01,  0.68) | 0.29  (0.76±0.01,  0.67) |
| CatBoost | 0.59  (0.81±0.01,  0.82) | 0.59  (0.87±0.02,  0.79) | 0.73  (0.78±0.01,  0.72) | 0.29  (0.78±0.01,0.70) | 0.42  (0.78±0.01,  0.71) | 0.33  (0.78±0.01,0.70) |