# **PODSUMOWANIE RAPORTU**

Najlepszy model	Regresja Logistyczna
Wynik walidacji	0.7948
AUROC	0.5258
Gini	0.0516

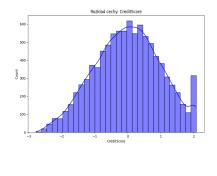
## Raport klasyfikacji:

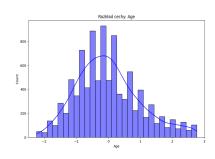
	Precision	Recall	F1-Score	Support
0	0.79	1.00	0.89	2282
1	0.00	0.00	0.00	589
macro avg	0.40	0.50	0.44	2871
weighted avg	0.63	0.79	0.70	2871

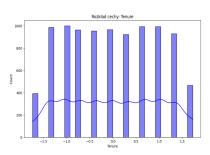
## Statystyki opisowe:

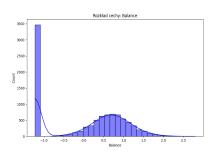
Feature	mean	std	min	25%	50%	75%	max
CreditScore	0.0	1.0	-2.79	-0.69	0.01	0.69	2.07
Age	0.0	1.0	-2.25	-0.65	-0.08	0.6	2.76
Tenure	-0.0	1.0	-1.74	-0.7	-0.01	0.69	1.73
Balance	-0.0	1.0	-1.22	-1.22	0.33	0.82	2.8
NumOfProducts	0.0	1.0	-0.94	-0.94	-0.94	0.88	2.7
EstimatedSalary	-0.0	1.0	-1.74	-0.85	0.0	0.86	1.74
Satisfaction Score	-0.0	1.0	-1.44	-0.73	-0.01	0.7	1.41
Point Earned	-0.0	1.0	-2.16	-0.86	-0.01	0.86	1.74
Geography_France	0.5	0.5	0.0	0.0	1.0	1.0	1.0
Geography_Germany	0.25	0.43	0.0	0.0	0.0	1.0	1.0
Geography_Spain	0.25	0.43	0.0	0.0	0.0	0.0	1.0
Gender_Male	0.55	0.5	0.0	0.0	1.0	1.0	1.0
Card Type	1.5	1.12	0.0	0.0	2.0	3.0	3.0
HasCrCard	0.71	0.46	0.0	0.0	1.0	1.0	1.0
IsActiveMember	0.5	0.5	0.0	0.0	1.0	1.0	1.0
Complain	0.2	0.4	0.0	0.0	0.0	0.0	1.0
Exited	0.21	0.4	0.0	0.0	0.0	0.0	1.0

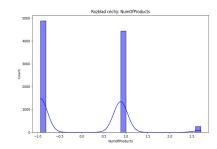
# Eksploracyjna analiza danych:

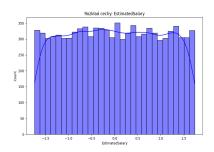


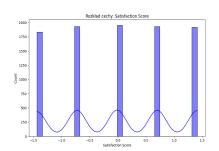


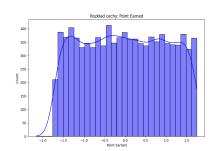


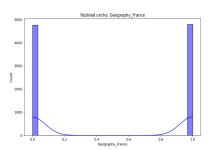


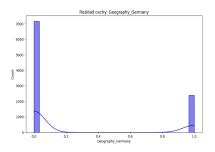


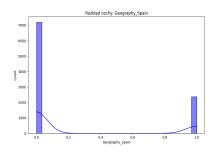


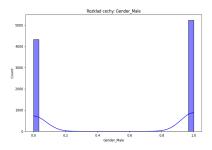


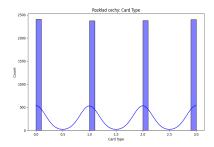


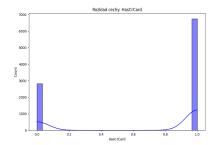


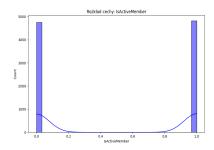


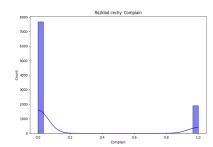


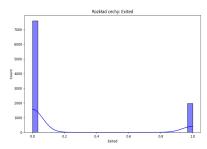




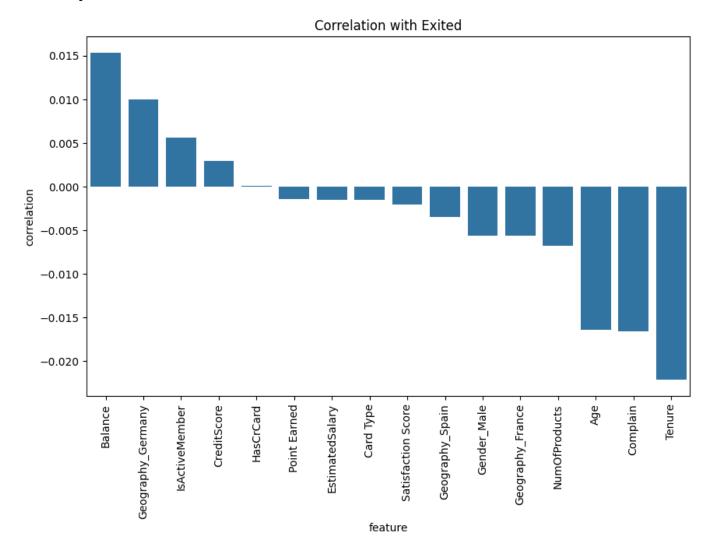






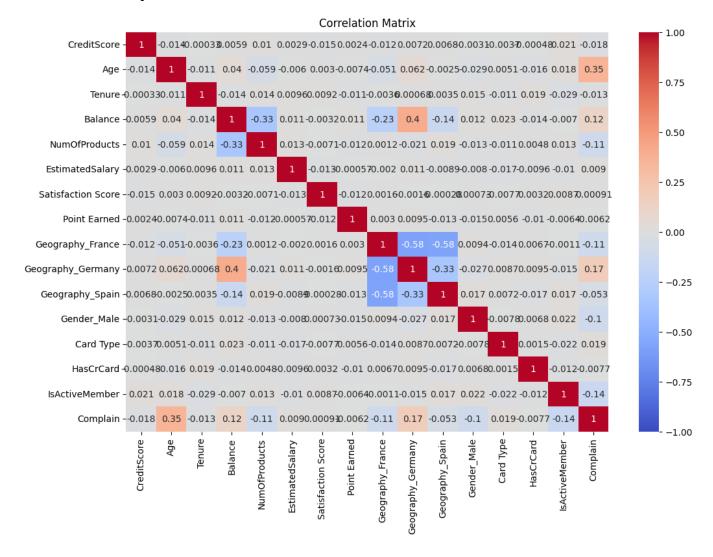


### Korelacja cech z celem:



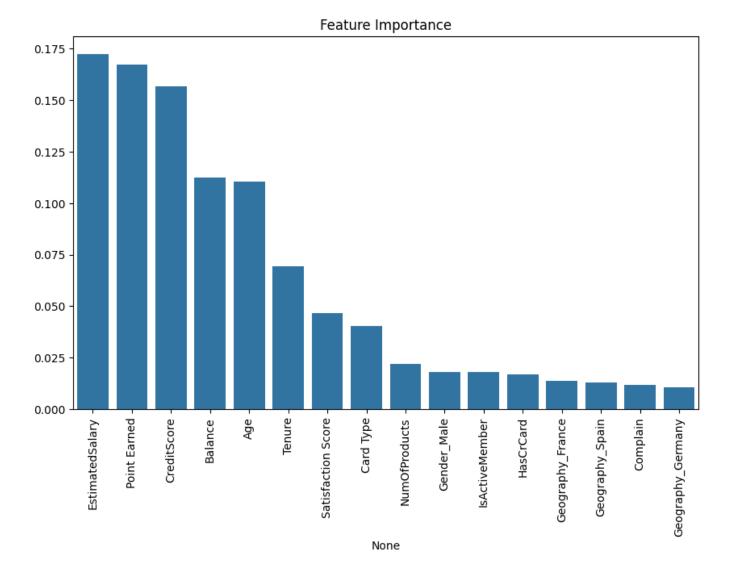
Wnioski: Wykres pokazuje, ktore cechy sa skorelowane z celem. Wartosci bliskie 1 oznaczaja silna korelacje dodatnia, a bliskie -1 silna korelacje ujemna. Cechy o wysokiej korelacji z celem moga byc kluczowe w modelowaniu. Wartosci ponizej 0.1 sa zazwyczaj uznawane za niskie i nieistotne. Najwyzsza korelacje z celem mialy cechy: [].

#### Macierz korelacji cech:



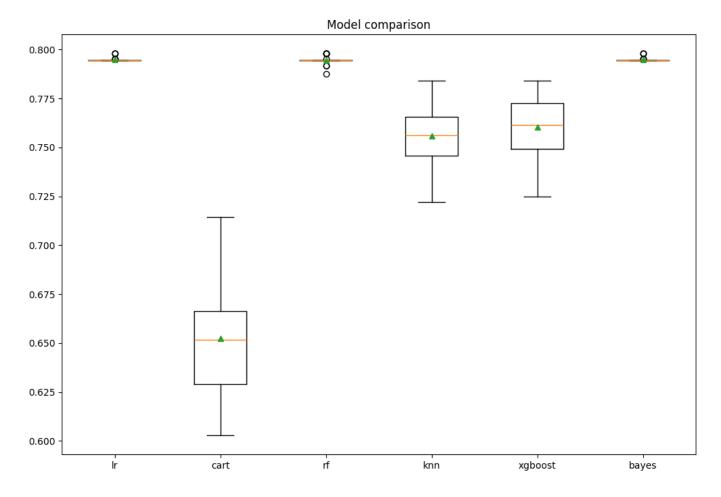
Wnioski: Wykres pokazuje, ktore cechy sa ze soba skorelowane. W wyniku analizy usunieto cechy o wysokiej korelacji miedzy soba: ['Geography\_Spain', 'Geography\_Germany', 'Geography France'].

### Waznosc cech:



Wnioski: Wykres pokazuje, ktore cechy miały najwiekszy wpływ na predykcje modelu. Mozna je rozwazyc jako kluczowe w dalszych analizach.

### Porownanie modeli:



Wnioski: Wykres przedstawia porownanie roznych modeli pod wzgledem ich skutecznosci. Widac, ze model 'Ir' osiagnal najwyzsze wyniki w walidacji. Z wynikiem 0.7948 jest to najlepszy model do dalszych analiz.

# Krzywa ROC:

