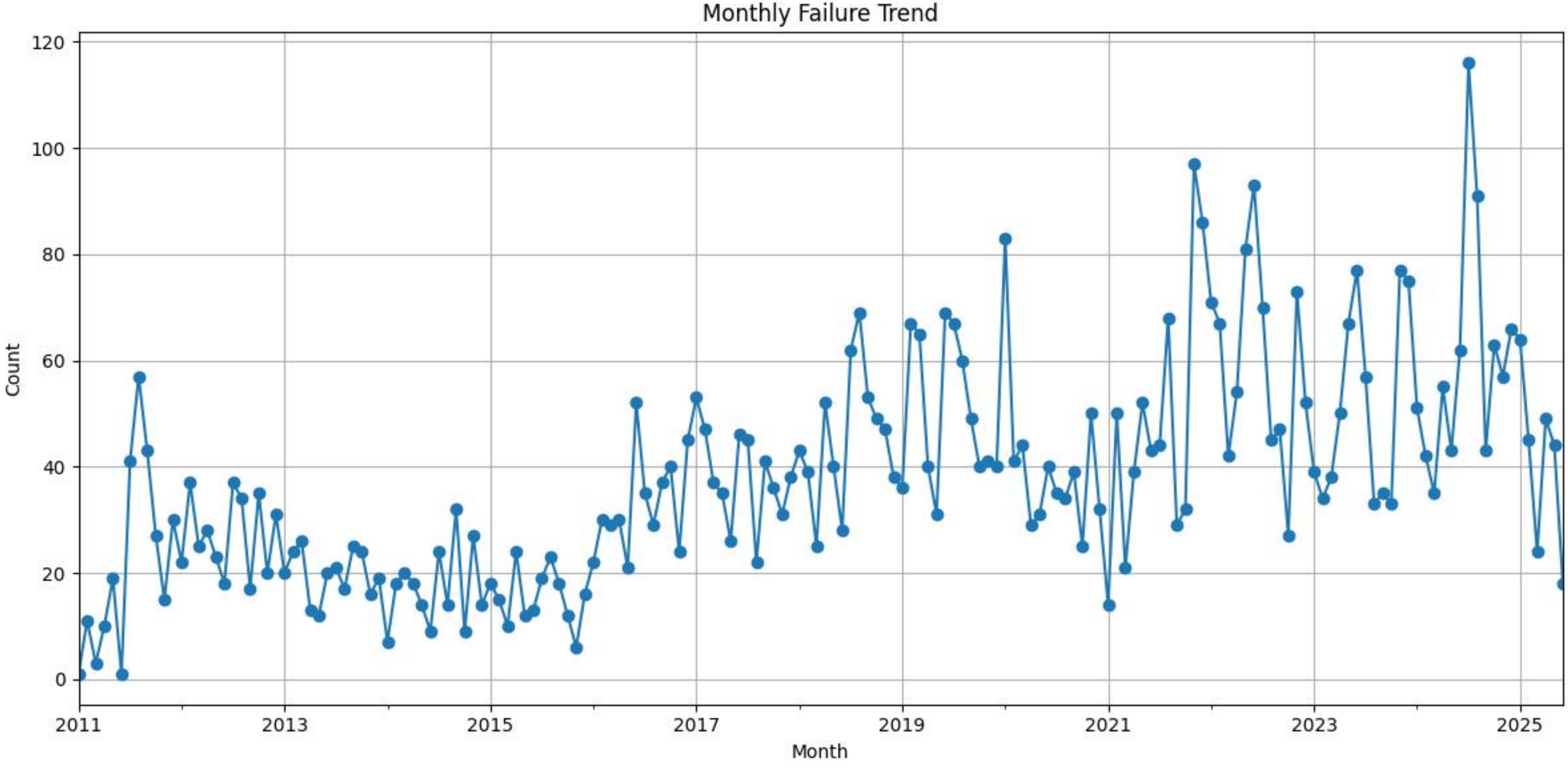
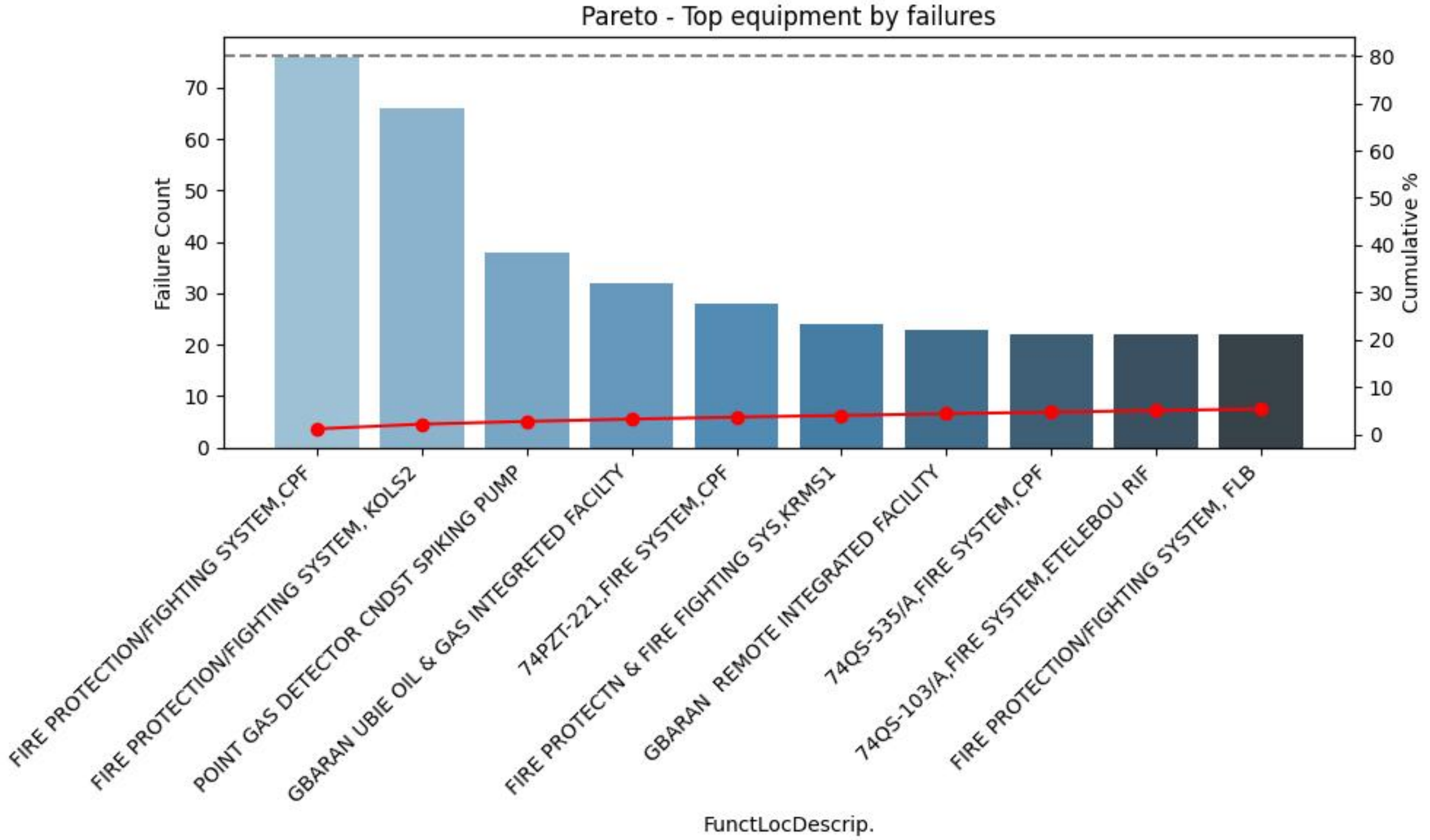
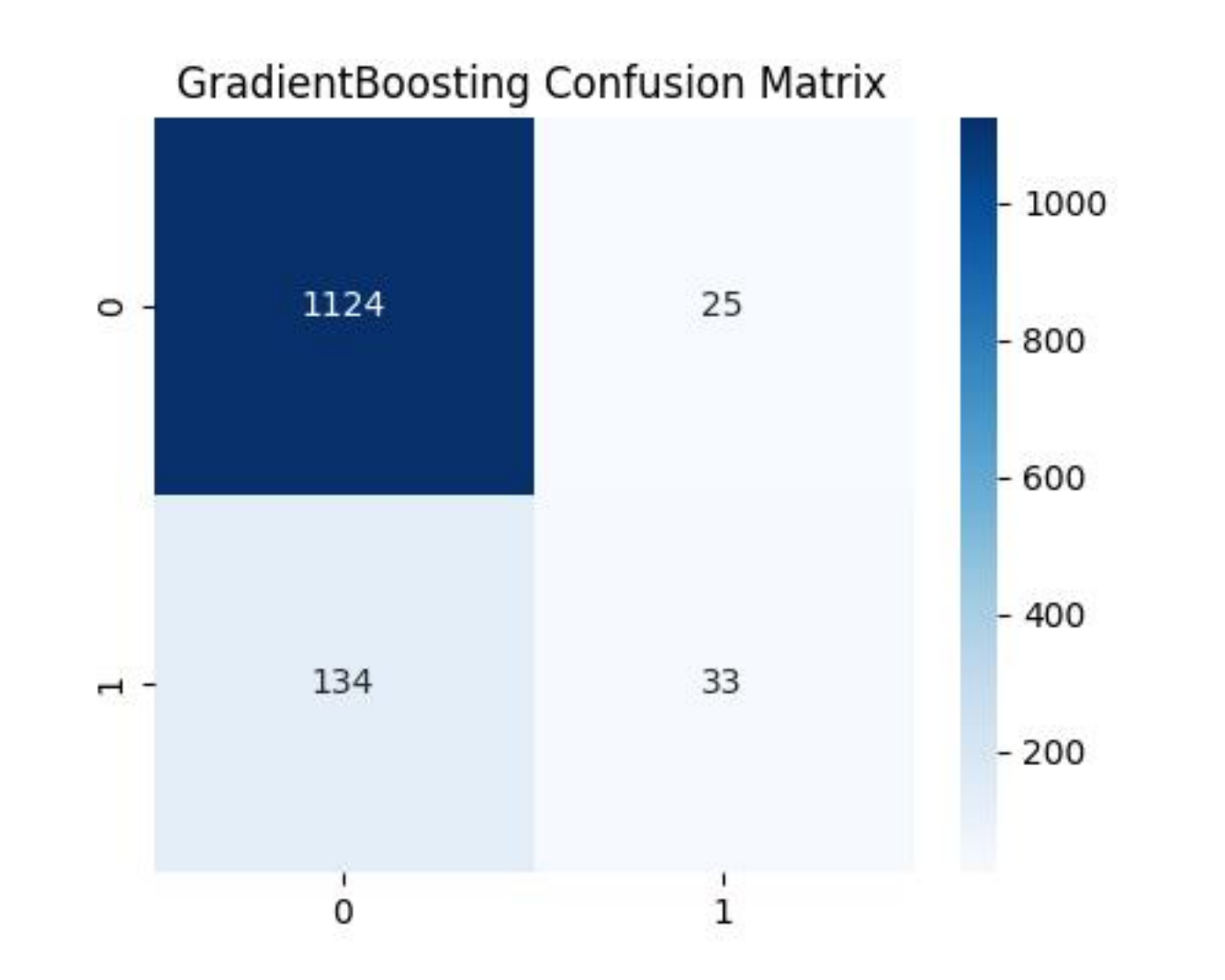
Correlation Heatmap

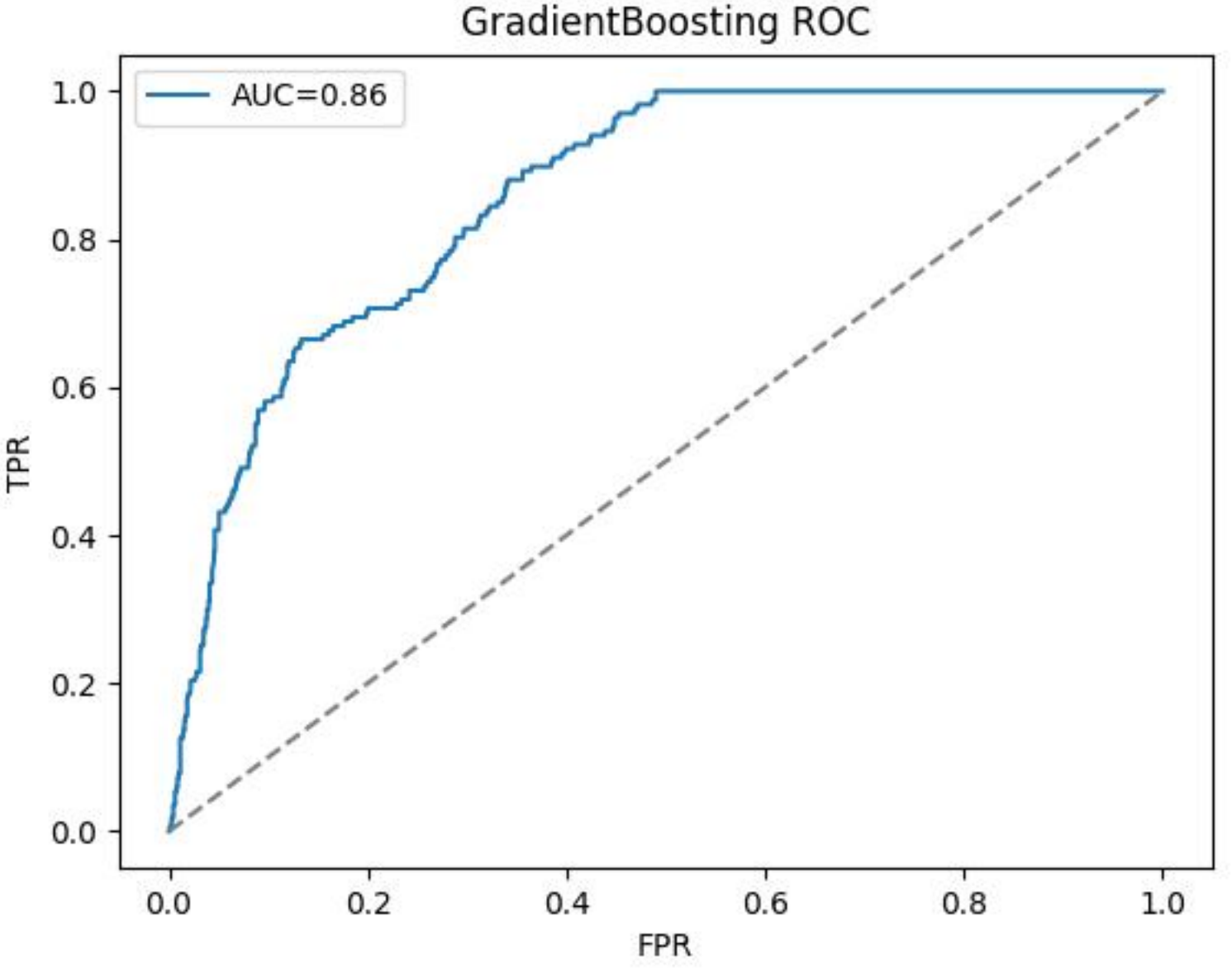
	Order	Priority	Estimated costs	Time_Diff	Failure rate	MTBF	MTTR
Order	1.00	0.10	0.03	0.15	0.07	-0.09	0.02
Priority	0.10	1.00	0.04	0.05	-0.03	-0.00	0.03
Estimated costs	0.03	0.04	1.00	-0.01	-0.01	-0.01	0.89
Time_Diff	0.15	0.05	-0.01	1.00	-0.24	0.76	-0.00
Failure rate	0.07	-0.03	-0.01	-0.24	1.00	-0.05	-0.01
MTBF	-0.09	-0.00	-0.01	0.76	-0.05	1.00	-0.01
MTTR	0.02	0.03	0.89	-0.00	-0.01	-0.01	1.00

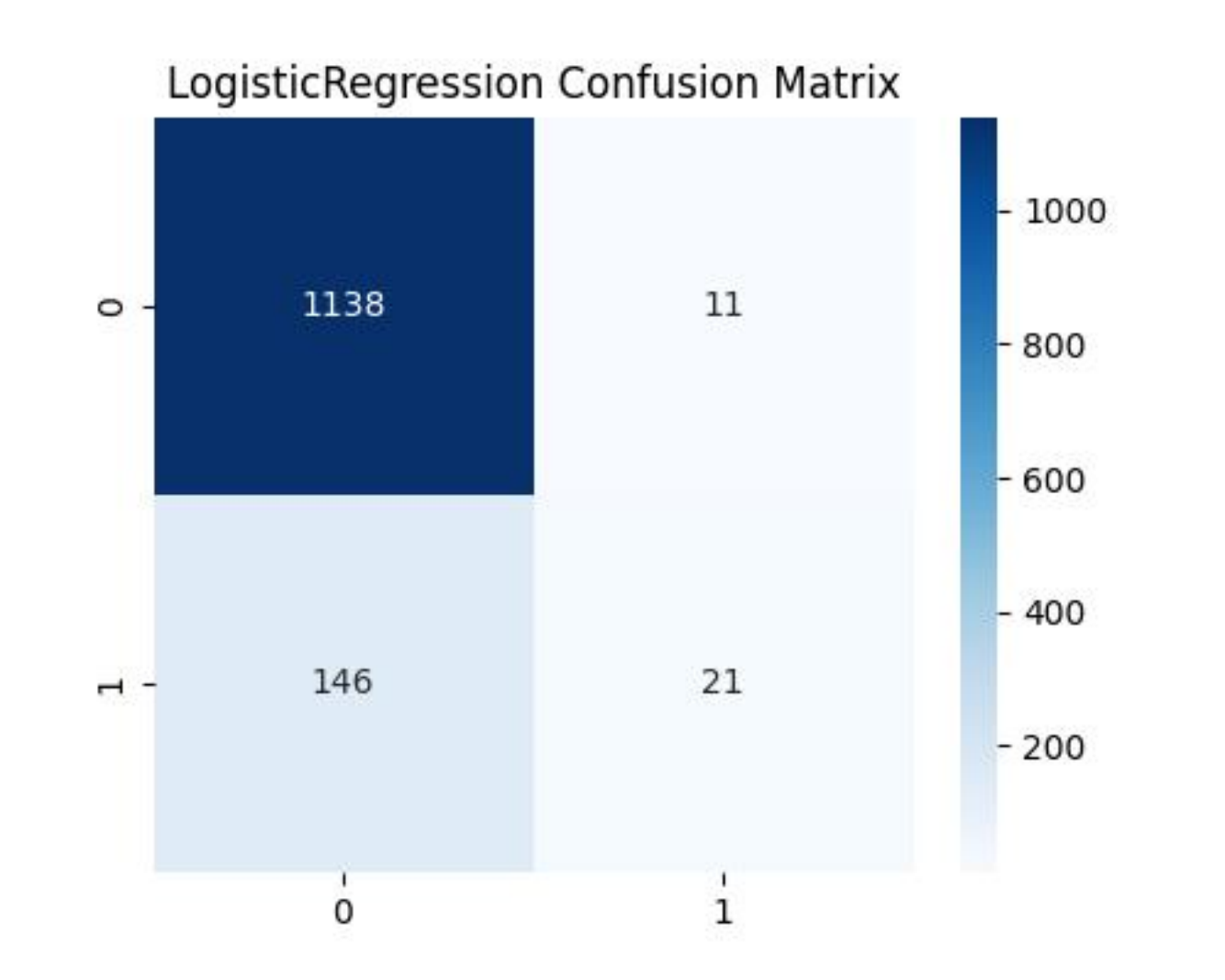
1.0
0.8
0.6
0.4
0.2
0.0
−0.2

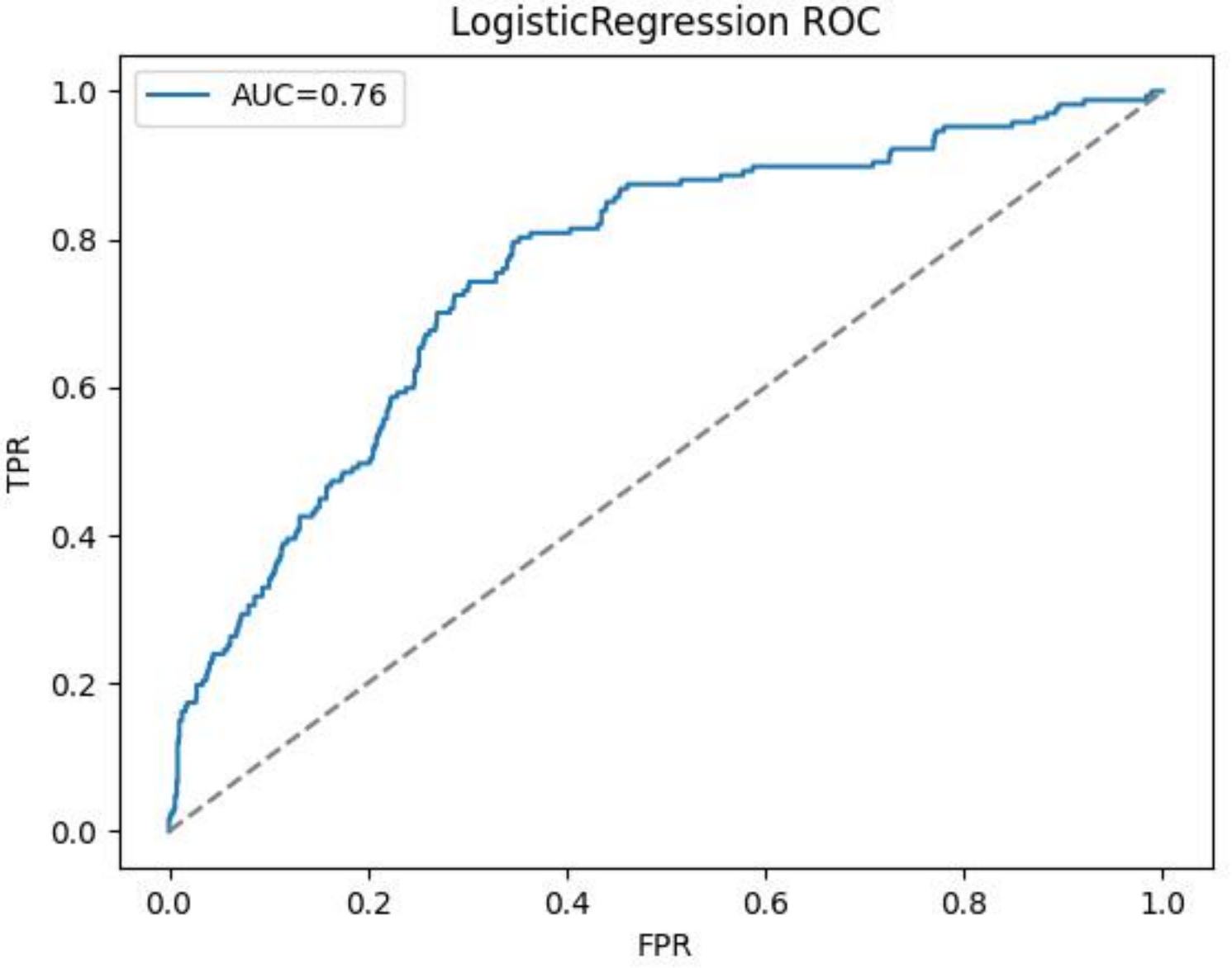

Monthly Failure Trend
Count
Month
0
20
40
60
80
100
120
2011
2013
2015
2017
2019
2021
2023
2025

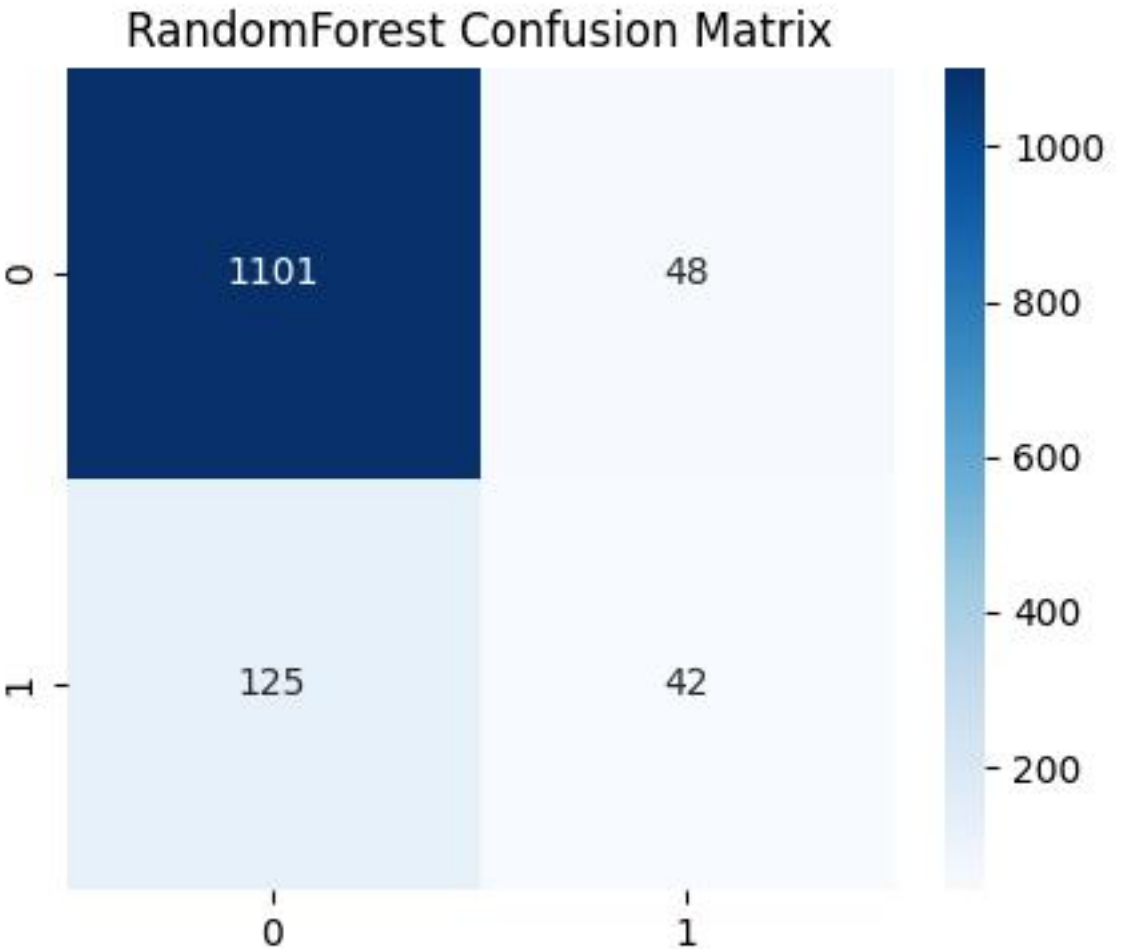

Pareto - Top equipment by failures
Failure Count
Cumulative %
0
10
20
30
40
50
60
70
80
FIRE PROTECTION/FIGHTING SYSTEM,CPF
FIRE PROTECTION/FIGHTING SYSTEM, KOLS2
POINT GAS DETECTOR CNDST SPIKING PUMP
GBARAN UBIE OIL & GAS INTEGRETED FACILTY
74PZT-221,FIRE SYSTEM,CPF
FIRE PROTECTN & FIRE FIGHTING SYS,KRMS1
GBARAN REMOTE INTEGRATED FACILITY
74QS-535/A,FIRE SYSTEM,CPF
74QS-103/A,FIRE SYSTEM,ETELEBOU RIF
FIRE PROTECTION/FIGHTING SYSTEM, FLB
FunctLocDescrip.

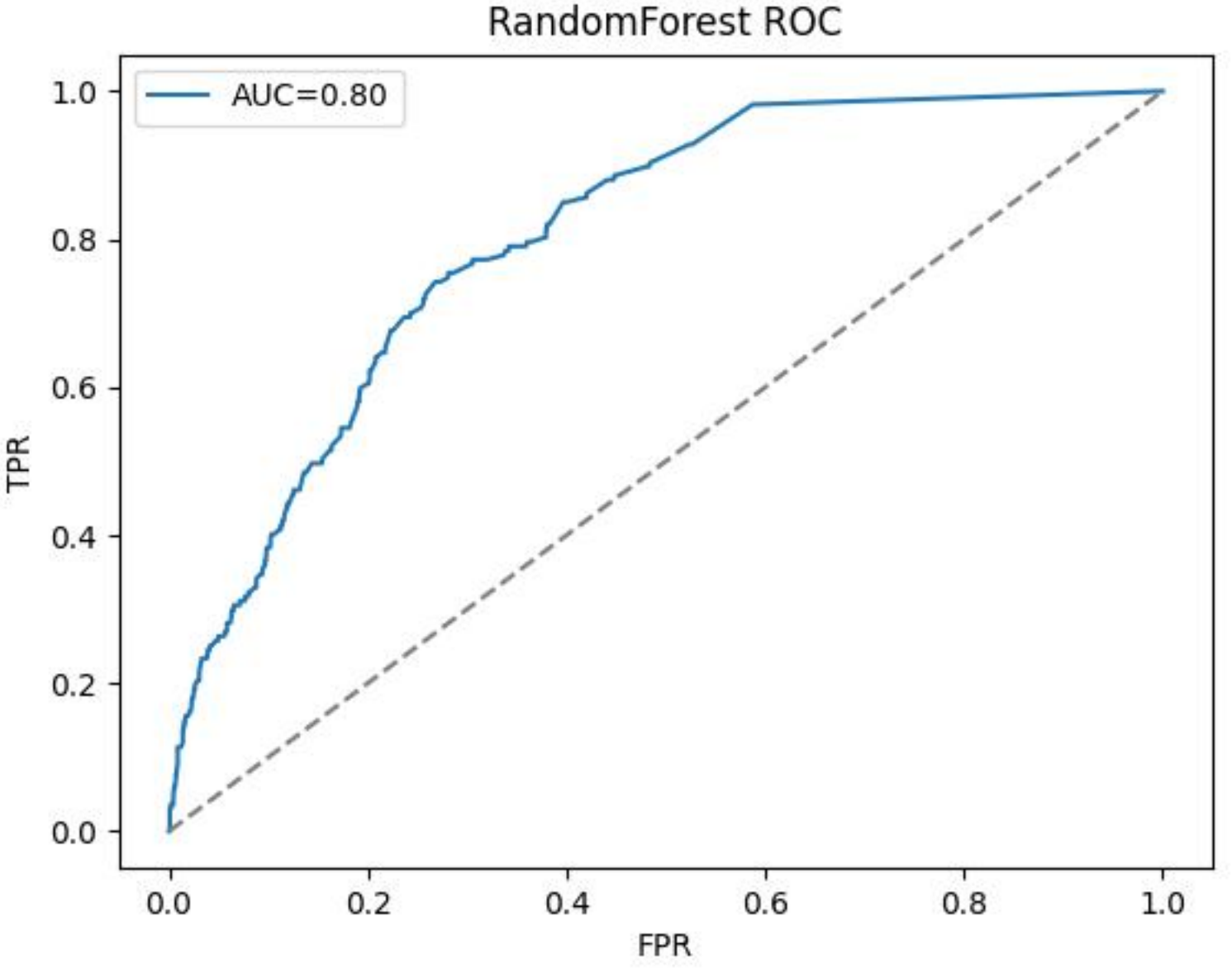

GradientBoosting Confusion Matrix
1124
25
134
33
0
1
0
1
1000
800
600
400
200

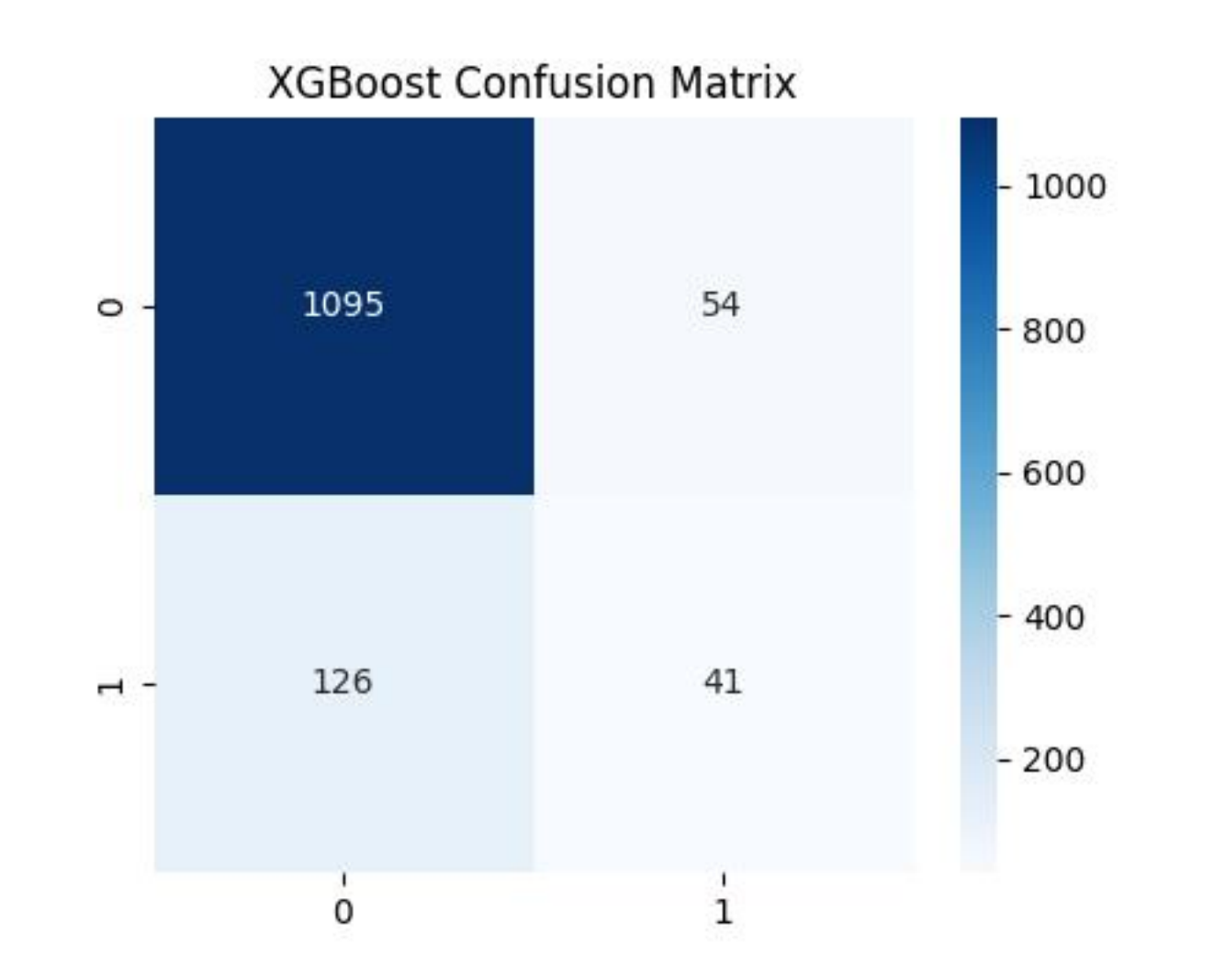

GradientBoosting ROC
AUC=0.86
TPR
FPR
0.0
0.2
0.4
0.6
0.8
1.0

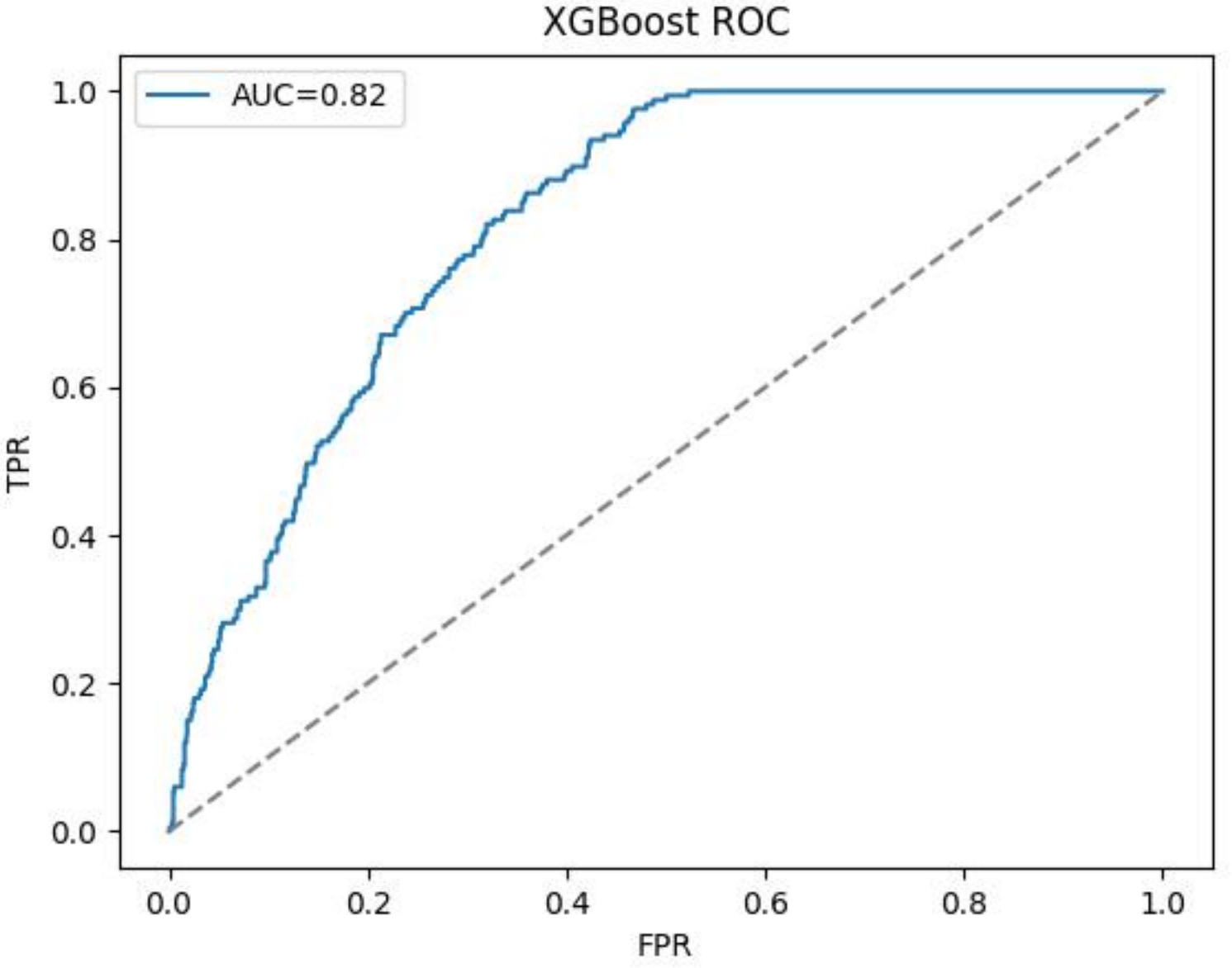

LogisticRegression Confusion Matrix
1138
11
146
21
0
1
0
1
1000
800
600
400
200


LogisticRegression ROC
AUC=0.76
TPR
FPR
0.0
0.2
0.4
0.6
0.8
1.0


RandomForest Confusion Matrix
1101
48
125
42
0
1
0
1
1000
800
600
400
200


RandomForest ROC
AUC=0.80
TPR
FPR
0.0
0.2
0.4
0.6
0.8
1.0


XGBoost Confusion Matrix
1095
54
126
41
0
1
0
1
1000
800
600
400
200


XGBoost ROC
AUC=0.82
TPR
FPR
0.0
0.2
0.4
0.6
0.8
1.0