RESULTS

D1 / Tuned, Baseline

method	accuracy	TP	FP	TN	FN	precision	recall	roc_auc	pr_auc	f1
D2_LoR_nt	0.852493	4864	791	112	70	0.860124	0.985813	0.737547	0.923814	0.562570
D2_XGB_nt	0.850266	4856	796	107	78	0.859165	0.984191	0.735168	0.922101	0.557065
D2_SGD_nt	0.754668	3855	353	550	1079	0.916112	0.781313	0.736476	0.923869	0.638900
D2_RF_nt	0.757581	3876	357	546	1058	0.915663	0.785570	0.736744	0.923466	0.640611
D2_LGBM_nt	0.845297	4934	903	0	0	0.845297	1.000000	0.740458	0.926146	0.458082

D2 / + Network Features

method	accuracy	TP	FP	TN	FN	precision	recall	roc_auc	pr_auc	f1
D3_LoR_sp	0.852321	4859	787	116	75	0.860609	0.984799	0.737298	0.924404	0.565296
D3_XGB_sp	0.849238	4845	791	112	89	0.859652	0.981962	0.734248	0.922096	0.559822
D3_RF_sp	0.759294	3889	360	543	1045	0.915274	0.788204	0.737313	0.922359	0.641485
D3_LGBM_sp	0.845297	4934	903	0	0	0.845297	1.000000	0.739483	0.925324	0.458082

D2 / + Network Features + Resampling Techniques

method	accuracy	TP	FP	TN	FN	precision	recall	roc_auc	pr_auc	f1
D4_LoR_oversmp	0.815830	4365	506	397	569	0.896120	0.884678	0.736687	0.923979	0.657594
D4_XGB_oversmp	0.812404	4342	503	400	592	0.896182	0.880016	0.722858	0.919054	0.655094
D4_LGBM_oversmp	0.788419	4126	427	476	808	0.906216	0.836238	0.738312	0.923185	0.652561
D4_LOR_undersmp	0.796128	4187	443	460	747	0.904320	0.848602	0.734929	0.923854	0.655797
D4_XGB_undersmp	0.809149	4305	485	418	629	0.898747	0.872517	0.730805	0.921579	0.657078
D4_LGBM_undersmp	0.809149	4310	490	413	624	0.897917	0.873531	0.740876	0.928646	0.655664
D4_LoR_smote	0.814459	4354	503	400	580	0.896438	0.882448	0.734823	0.923078	0.657121
D4_XGB_smote	0.834847	4641	671	232	293	0.873682	0.940616	0.702343	0.913423	0.615422
D4_LGBM_smote	0.818743	4413	537	366	521	0.891515	0.894406	0.729090	0.921372	0.650948
D5_SVM_oversmp	0.790646	4144	432	471	790	0.905594	0.839887	0.720892	0.913536	0.653404

D2 / + Network Features + Resampling Techniques+PCA, Tuned

method	accuracy	TP	FP	TN	FN	precision	recall	roc_auc	pr_auc	f1
D4_XGB_oversmp	0.793558	4197	468	435	737	0.899678	0.850628	0.722223	0.918034	0.646872
D4_LGBM_oversmp	0.796642	4204	457	446	730	0.901952	0.852047	0.730282	0.919490	0.652671

D3 / + New Time-Based Features+ Resampling Techniques, Tuned

method	accuracy	TP	FP	TN	FN	precision	recall	roc_auc	pr_auc	f1
D3_LoR_new-feats	0.806115	4266	526	374	590	0.890234	0.878501	0.756896	0.934043	0.642808
D3_XGB_new-feats	0.787352	4051	419	481	805	0.906264	0.834226	0.762781	0.937754	0.654414
D3_SVM_new-feats	0.801077	4187	476	424	669	0.897920	0.862232	0.738397	0.919806	0.652602
D3_LGBM_new-feats	0.801598	4213	499	401	643	0.894100	0.867586	0.762742	0.939076	0.646598

Network Features Enhanced Dataset, K-Means + Classifier Results

Random Oversampling. Applied with PCA n=11, 90% var.

	method	accuracy	TP	FP	TN	FN	precision	recall	roc_auc	pr_auc	f1
K-means + LoR tuned	D5_LoR_km-clu-oversmp-0	0.825027	1486	132	70	198	0.918418	0.882423	0.694533	0.942305	0.598966
	D5_LoR_km-clu-oversmp-1	0.799546	1342	178	66	175	0.882895	0.884641	0.634072	0.904623	0.577966
	D5_LoR_km-clu-oversmp-2	0.815972	1093	85	82	180	0.927844	0.858602	0.749510	0.949690	0.637083
	D5_LoR_km-clu-oversmp-3	0.631158	311	129	163	148	0.706818	0.677560	0.667972	0.753389	0.616255
	method	**accuracy**	**TP**	**FP**	**TN**	**FN**	**precision**	**recall**	**roc_auc**	**pr_auc**	**f1**
K-means + XGB tuned	D5_XGB_km-clu0_oversmp	0.817073	1455	116	86	229	0.926162	0.864014	0.692004	0.940910	0.613349
	D5_XGB_km-clu1_oversmp	0.749006	1224	149	95	293	0.891479	0.806856	0.621297	0.897187	0.573846
	D5_XGB_km-clu2_oversmp	0.836111	1142	105	62	131	0.915798	0.897093	0.719976	0.943540	0.625397
	D5_XGB_km-clu3_oversmp	0.581891	254	109	183	205	0.699725	0.553377	0.642985	0.727343	0.578120
	method	**accuracy**	**TP**	**FP**	**TN**	**FN**	**precision**	**recall**	**roc_auc**	**pr_auc**	**f1**
K-means + SVM tuned	D5_SVM_km-clu-oversmp-0	0.821315	1474	127	75	210	0.920675	0.875297	0.687272	0.930168	0.602710
	D5_SVM_km-clu-oversmp-1	0.783646	1299	163	81	218	0.888509	0.856295	0.621303	0.895858	0.585224
	D5_SVM_km-clu-oversmp-2	0.788194	1046	78	89	227	0.930605	0.821681	0.731419	0.943575	0.620644
	D5_SVM_km-clu-oversmp-3	0.629827	296	115	177	163	0.720195	0.644880	0.665570	0.751926	0.620293