

Supplementary File

TABLE I: FTFD Performance of Eleven Methods When LR Is Used as a Base Classifier

Train	Test	Criteria	SMEN	SMTL	ROS	ADASYN	SMOTE	TL	RUS	RGAN	DWGAN	VGAN	BEAGAN
Jan.	Feb.	F_1	0.6611	0.6525	0.6351	0.4939	0.6533	0.8624	0.7700	0.8619	0.8340	0.8439	0.8588
		G_m	0.8853	0.8827	0.8778	0.8181	0.8830	0.9047	0.9032	0.9054	0.9011	0.9042	0.9073
Feb.	Mar.	F_1	0.8315	0.8796	0.8501	0.6851	0.8751	0.9308	0.7692	0.9289	0.6666	0.8532	0.9522
		G_m	0.9737	0.9800	0.9762	0.9527	0.9817	0.9824	0.9643	0.9845	0.9468	0.8532	0.9870
Mar.	Apr.	F_1	0.8686	0.8685	0.8685	0.8730	0.8828	0.8348	0.8701	0.8156	0.8591	0.8331	0.8750
		G_m	0.8832	0.8832	0.8832	0.8862	0.8910	0.8523	0.8846	0.8479	0.8914	0.8838	0.8890
Apr.	May.	F_1	0.5938	0.5798	0.6036	0.6363	0.6901	0.8933	0.8435	0.9058	0.8900	0.8824	0.9175
		G_m	0.9292	0.9251	0.8168	0.8933	0.9235	0.9282	0.9254	0.9193	0.9291	0.9070	0.9293
May.	Jun.	F_1	0.8139	0.8012	0.8065	0.7336	0.7028	0.8935	0.7759	0.8925	0.9029	0.8934	0.9081
		G_m	0.9646	0.9617	0.9646	0.9540	0.9426	0.9132	0.9589	0.9143	0.9291	0.9182	0.9308
Average value		F_1	0.7538	0.7563	0.7528	0.6844	0.7608	0.8830	0.8057	0.8809	0.8305	0.8612	0.9023
		G_m	0.9272	0.9265	0.9037	0.9009	0.9244	0.9162	0.9273	0.9143	0.9195	0.8933	0.9287
Average ranking		F_1	7.2000	7.6000	7.8000	8.4000	6.4000	3.6000	6.8000	4.6000	6.0000	5.8000	1.6000
		G_m	4.8000	6.0000	7.0000	7.8000	5.4000	6.2000	5.4000	6.6000	5.6000	7.8000	2.6000

TABLE II: FTFD Performance of Eleven Methods When MLP Is Used as a Base Classifier

Train	Test	Criteria	SMEN	SMTL	ROS	ADASYN	SMOTE	TL	RUS	RGAN	DWGAN	VGAN	BEAGAN
Jan.	Feb.	F_1	0.6684	0.6565	0.6358	0.6224	0.6385	0.7443	0.6970	0.7607	0.7518	0.6718	0.7652
		G_m	0.8783	0.8828	0.8734	0.8718	0.8737	0.9012	0.8891	0.9034	0.8973	0.8848	0.9098
Feb.	Mar.	F_1	0.8927	0.8587	0.8335	0.8454	0.8858	0.9078	0.7741	0.8797	0.8886	0.8109	0.9157
		G_m	0.9850	0.9807	0.9773	0.9789	0.9852	0.9879	0.9694	0.9845	0.9844	0.9751	0.9941
Mar.	Apr.	F_1	0.8315	0.8299	0.8267	0.8299	0.8972	0.8072	0.8315	0.8088	0.8324	0.7921	0.8710
		G_m	0.8823	0.8809	0.8780	0.8809	0.9040	0.8604	0.8823	0.8619	0.8850	0.8470	0.8887
Apr.	May.	F_1	0.8286	0.8516	0.8528	0.9052	0.6604	0.8299	0.8193	0.8123	0.8044	0.8236	0.8859
		G_m	0.8479	0.8622	0.8927	0.9105	0.9238	0.8548	0.8932	0.8451	0.8592	0.8663	0.9262
May.	Jun.	F_1	0.9683	0.9657	0.9584	0.9216	0.8651	0.9715	0.8694	0.9716	0.9702	0.9728	0.9741
		G_m	0.9922	0.9896	0.9889	0.9872	0.9713	0.9843	0.9742	0.9855	0.9842	0.9856	0.9869
Average value		F_1	0.8379	0.8325	0.8214	0.8249	0.7894	0.8521	0.7983	0.8466	0.8495	0.8142	0.8824
		G_m	0.9171	0.9192	0.9221	0.9258	0.9289	0.9177	0.9216	0.9161	0.9220	0.9118	0.9411
Average ranking		F_1	5.2000	6.4000	7.6000	7.0000	7.4000	5.0000	7.6000	5.8000	5.0000	7.2000	1.4000
		G_m	5.4000	5.8000	7.0000	6.4000	5.2000	6.4000	6.8000	6.8000	6.0000	7.8000	2.0000