

TABLE I: precision result on 400 target patients of several models using original features

Precision							
Classification Models:	SVMl	SVMnl	GNB	KNN	DT	RF	GCNs
Feature Extraction:	Rank 2	Rank 7	Rank 5	Rank 3	Rank 4	Rank 6	Rank 1
Netpro2vecMetgraphs	0.957	0.859	0.874	0.952	0.951	0.933	0.972
Netpro2vecNDD	0.955	0.857	0.867	0.968	0.939	0.919	0.972
Netpro2vecTM1	0.972	0.852	0.858	0.961	0.912	0.919	0.972
Netpro2vecTM2	0.955	0.891	0.759	0.846	0.831	0.812	0.952
Netpro2vecNDD+TM1	0.969	0.852	0.828	0.947	0.909	0.888	0.982
Netpro2vecNDD+TM1+TM2	0.958	0.873	0.749	0.855	0.823	0.798	0.931
Graph2Vec	0.937	0.872	0.919	0.933	0.928	0.928	0.972
GL2Vec	0.918	0.879	0.945	0.950	0.938	0.933	0.955
FeatherGraph	0.723	0.669	0.579	0.675	0.638	0.693	0.788
SF	0.614	0.672	0.695	0.669	0.643	0.725	0.726

TABLE II: recall result on 400 target patients of several models using original features

Recall							
Classification Models:	SVMl	SVMnl	GNB	KNN	DT	RF	GCNs
Feature Extraction:	Rank 3	Rank 7	Rank 5	Rank 2	Rank 4	Rank 6	Rank 1
Netpro2vecMetgraphs	0.949	0.879	0.862	0.965	0.947	0.930	0.939
Netpro2vecNDD	0.949	0.879	0.849	0.965	0.935	0.918	0.969
Netpro2vecTM1	0.969	0.885	0.845	0.956	0.899	0.915	0.969
Netpro2vecTM2	0.949	0.879	0.738	0.836	0.824	0.796	0.933
Netpro2vecNDD+TM1	0.967	0.854	0.826	0.942	0.902	0.884	0.981
Netpro2vecNDD+TM1+TM2	0.952	0.869	0.730	0.845	0.816	0.777	0.921
Graph2Vec	0.927	0.8562	0.919	0.926	0.926	0.922	1
GL2Vec	0.904	0.873	0.933	0.938	0.919	0.909	0.939
FeatherGraph	0.706	0.656	0.526	0.656	0.632	0.666	0.751
SF	0.559	0.616	0.627	0.654	0.636	0.695	0.690

TABLE III: F1 score result on 400 target patients of several models using original features

F1 Score							
Classification Models:	SVMl	SVMnl	GNB	KNN	DT	RF	GCNs
Feature Extraction:	Rank 2	Rank 7	Rank 5	Rank 3	Rank 4	Rank 6	Rank 1
Netpro2vecMetgraphs	0.952	0.860	0.857	0.965	0.947	0.929	1
Netpro2vecNDD	0.949	0.859	0.842	0.965	0.934	0.916	1
Netpro2vecTM1	0.969	0.869	0.839	0.957	0.907	0.909	0.969
Netpro2vecTM2	0.948	0.871	0.738	0.837	0.821	0.795	0.925
Netpro2vecNDD+TM1	0.967	0.836	0.819	0.936	0.907	0.878	0.976
Netpro2vecNDD+TM1+TM2	0.957	0.869	0.729	0.838	0.816	0.775	0.920
Graph2Vec	0.924	0.834	0.916	0.925	0.926	0.918	1
GL2Vec	0.895	0.861	0.932	0.937	0.932	0.929	0.943
FeatherGraph	0.704	0.651	0.503	0.653	0.630	0.666	0.762
SF	0.553	0.609	0.629	0.644	0.631	0.686	0.696