Table 12.1: **The T2DM Sensitivity and Specificity in Normalized Removal Edges Feature**

A. T2DM Sensitivity

	SVMl	SVMnl	GNB	KNN	DT	RF	GCN
Gene expression	Rank 3	Rank 2	Rank 6	Rank 4	Rank 7	Rank 5	Rank 1
Netpro2vecMetgraphs	0.992	0.992	0.962	**1**	0.963	969	**1**
Netpro2vecNDD	0.985	0.985	0.977	0.992	**0.969**	0.954	**1**
Netpro2vecTM1	**1**	**1**	0.969	**1**	0.955	**1**	**1**
Netpro2vecTM2	**1**	**1**	0.697	0.947	0.857	0.939	**1**
Netpro2vecNDD+TM1	**1**	**1**	**0.977**	**1**	0.963	0.992	**1**
Netpro2vecNDD+TM1+TM2	**1**	**1**	0.727	0.955	0.851	0.918	**1**
Graph2Vec	0.969	0.977	0.969	0.977	**0.969**	0.969	**1**
GL2Vec	0.977	**1**	0.969	0.962	0.962	0.962	**1**
FeatherGraph	0.801	0.721	0.876	0.743	0.600	0.743	0.833

B. T2DM Specitivity

	SVMl	SVMnl	GNB	KNN	DT	RF	GCN
Gene expression	Rank 3	Rank 2	Rank 6	Rank 4	Rank 7	Rank 5	Rank 1
Netpro2vecMetgraphs	0.977	0.992	0.962	**1**	0.963	0.969	**1**
Netpro2vecNDD	0.985	0.985	0.977	0.992	**0.970**	0.955	**1**
Netpro2vecTM1	**1**	**1**	0.969	**1**	0.941	**1**	**1**
Netpro2vecTM2	**1**	**1**	0.697	0.947	0.857	0.939	**1**
Netpro2vecNDD+TM1	**1**	**1**	**0.977**	**1**	0.963	0.992	**1**
Netpro2vecNDD+TM1+TM2	**1**	**1**	0.727	0.955	0.859	0.918	**1**
Graph2Vec	0.969	0.977	0.969	0.977	0.962	0.969	**1**
GL2Vec	0.977	**1**	0.969	0.962	0.962	0.962	**1**
FeatherGraph	0.801	0.721	0.876	0.743	0.600	0.743	**1**

Table 12.2: The non-T2DM Sensitivity and Specificity in Normalized Removal Edges Feature

A. non-T2DM Sensitivity							
	SVMl	**SVMnl**	**GNB**	**KNN**	**DT**	**RF**	**GCN**
Gene expression	Rank 3	Rank 2	Rank 7	Rank 6	Rank 5	Rank 4	Rank 1
Netpro2vecMetgraphs	**0.969**	0.969	0.877	**0.931**	0.908	0.931	**1**
Netpro2vecNDD	0.962	0.962	0.871	0.939	0.931	0.931	**1**
Netpro2vecTM1	0.962	0.938	0.847	0.931	0.915	0.931	**1**
Netpro2vecTM2	0.962	0,871	0.789	0.872	0.863	0.789	**1**
Netpro2vecNDD+TM1	**0.969**	0.939	0.809	0.924	**0.932**	**0.938**	**1**
Netpro2vecNDD+TM1+TM2	0.947	0.841	0.811	0.917	0.887	0.826	**1**
Graph2Vec	0.923	**0.977**	0.900	**0.931**	0.908	0.931	**1**
GL2Vec	0.908	0.946	**0.908**	0.908	0.915	0.915	**1**
FeatherGraph	0.771	0.763	0.841	0.832	0.809	0.733	0.909

B. non-T2DM Specitivity							
	SVMl	**SVMnl**	**GNB**	**KNN**	**DT**	**RF**	**GCN**
Gene expression	Rank 3	Rank 2	Rank 7	Rank 6	Rank 5	Rank 4	Rank 1
Netpro2vecMetgraphs	**0.969**	0.969	0.877	**0.931**	0.908	0.931	**1**
Netpro2vecNDD	0.962	0.962	0.871	0.938	0.931	0.931	**1**
Netpro2vecTM1	0.962	0.938	0.847	0.931	0.916	0.931	**1**
Netpro2vecTM2	0.962	0.864	0.789	0.872	0.863	0.789	**1**
Netpro2vecNDD+TM1	**0.969**	0.939	0.808	0.924	**0.932**	**0.938**	**1**
Netpro2vecNDD+TM1+TM2	0.947	0.841	0.811	0.917	0.887	0.826	**1**
Graph2Vec	0.923	**0.977**	0.9	**0.931**	0.908	0.931	0.966
GL2Vec	0.908	0.946	**0.908**	0.908	0.915	0.915	**1**
FeatherGraph	0.771	0.763	0.841	0.832	0.809	0.733	**1**

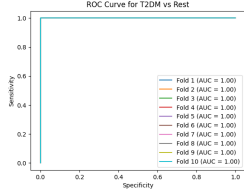**Table 12.3: The Healthy Sensitivity and Specificity in Normalized Removal Edges Feature**

A. Healthy Sensitivity							
	SVMl	**SVMnl**	**GNB**	**KNN**	**DT**	**RF**	**GCN**
Gene expression	**Rank 2**	**Rank 6**	**Rank 5**	**Rank 3**	**Rank 4**	**Rank 7**	**Rank 1**
Netpro2vecMetgraphs	0.970	0.789	0.774	**0.977**	0.939	0.853	**1**
Netpro2vecNDD	0.971	0.825	0.797	0.969	0.931	0.926	**1**
Netpro2vecTM1	0.970	0.876	0.832	0.969	0.970	0.889	**1**
Netpro2vecTM2	**0.977**	**0.932**	0.864	0.864	0.765	0.872	**1**
Netpro2vecNDD+TM1	**0.977**	0.777	0.751	0.955	0.948	0.834	**1**
Netpro2vecNDD+TM1+TM2	0.962	0.919	0.871	0.774	0.760	0.841	**1**
Graph2Vec	0.903	0.804	0.949	0.947	0.932	**0.932**	0.909
GL2Vec	0.925	0.763	**0.954**	0.954	**0.977**	0.909	**1**
FeatherGraph	0.666	0.674	0.441	0.583	0.568	0.774	0.727

B. Healthy Specitivity							
	SVMl	**SVMnl**	**GNB**	**KNN**	**DT**	**RF**	**GCN**
Gene expression	**Rank 2**	**Rank 6**	**Rank 5**	**Rank 3**	**Rank 4**	**Rank 7**	**Rank 1**
Netpro2vecMetgraphs	0.970	0.789	0.774	**0.977**	0.939	0.853	**1**
Netpro2vecNDD	0.971	0.825	0.797	0.969	0.931	0.926	**1**
Netpro2vecTM1	0.970	0.876	0.832	0.969	0.970	0.889	**1**
Netpro2vecTM2	**0.977**	**0.932**	0.864	0.864	0.783	0.872	**1**
Netpro2vecNDD+TM1	**0.977**	0.777	0.751	0.969	0.948	0.834	**1**
Netpro2vecNDD+TM1+TM2	0.963	0.919	0.871	0.774	0.760	0.841	**1**
Graph2Vec	0.910	0.804	0.949	0.947	0.932	**0.932**	0.966
GL2Vec	0.925	0.763	**0.954**	0.954	**0.977**	0.909	**1**
FeatherGraph	0.666	0.674	0.441	0.583	0.568	0.766	**1**

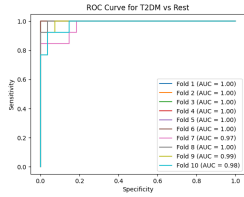# 1 ROC chart for The T2DM Sensitivity and Specificity in Normalized Removal Edges Feature
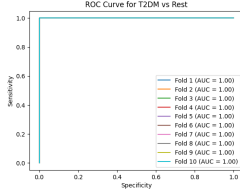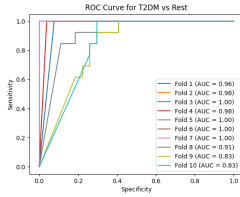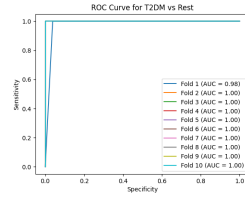

(a) SVMnl/Rank 2
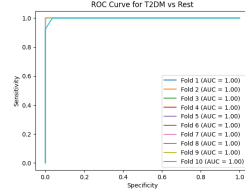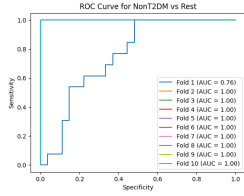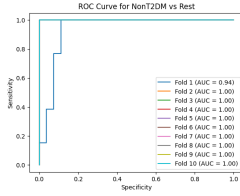
(b) SVMl/Rank 3

(c) KNN/Rank 4
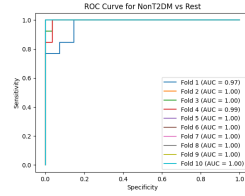
(d) RF/Rank 5

(e) GNB/Rank 6

(f) DT/Rank 7

2 ROC chart for The non-T2DM Sensitivity and Specificity in Normalized Removal Edges Feature
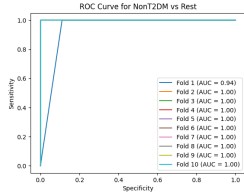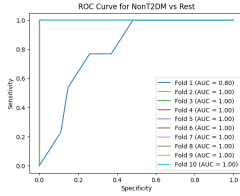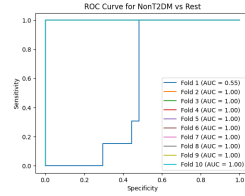

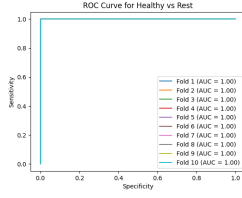(a) SVMnl/Rank 2

(b) SVMl/Rank 3
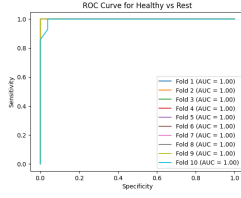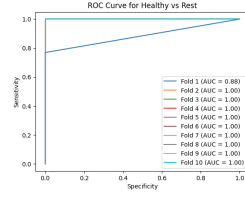
(c) RF/Rank 4

(d) DT/Rank 5

(e) KNN/Rank 6

(f) GNB/Rank 7

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3 ROC chart for The Healthy Sensitivity and Specificity in Normalized Removal Edges Feature
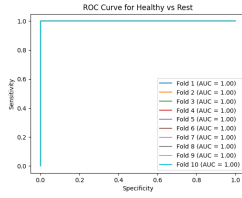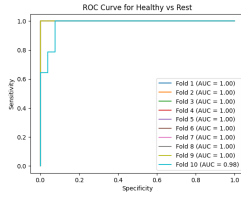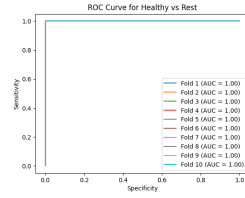

(a) SVMl/Rank 2

(b) KNN/Rank 3

(c) DT/Rank 4

(d) GNB/Rank 5

(e) SVMnl/Rank 6

(f) RF/Rank 7