

Table 8.1: Table T2DM Sensitivity and specificity within Normalized Features

A. T2DM Sensitivity							
	SVMl	SVMnl	GNB	KNN	DT	RF	GCN
Gene expression	Rank 2	Rank 3	Rank 6	Rank 4	Rank 7	Rank 5	Rank 1
Netpro2vecMetgraphs	0.992	0.992	<b>0.977</b>	<b>1</b>	<b>0.969</b>	0.976	<b>1</b>
Netpro2vecNDD	<b>1</b>	0.992	0.969	<b>1</b>	<b>0.969</b>	0.977	<b>1</b>
Netpro2vecTM1	<b>1</b>	<b>1</b>	0.962	<b>1</b>	0.954	0.985	<b>1</b>
Netpro2vecTM2	<b>1</b>	<b>1</b>	0.697	0.932	0.910	0.947	<b>1</b>
Netpro2vecNDD+TM1	<b>1</b>	<b>1</b>	0.969	<b>1</b>	0.948	<b>1</b>	<b>1</b>
Netpro2vecNDD+TM1+TM2	<b>1</b>	<b>1</b>	0.743	0.942	0.852	0.924	<b>1</b>
Graph2Vec	0.962	0.985	0.969	0.969	0.967	0.954	<b>1</b>
GL2Vec	0.969	0.992	0.962	0.962	<b>0.969</b>	0.954	<b>1</b>
FeatherGraph	0.801	0.721	0.876	0.743	0.6	0.743	0.944

B. T2DM Specitivity							
	SVMl	SVMnl	GNB	KNN	DT	RF	GCN
Gene expression	Rank 2	Rank 3	Rank 6	Rank 4	Rank 7	Rank 5	Rank 1
Netpro2vecMetgraphs	0.992	0.992	<b>0.977</b>	<b>1</b>	<b>0.969</b>	0.977	<b>1</b>
Netpro2vecNDD	<b>1</b>	0.992	0.969	<b>1</b>	<b>0.969</b>	0.977	<b>1</b>
Netpro2vecTM1	<b>1</b>	<b>1</b>	0.962	<b>1</b>	0.954	<b>1</b>	<b>1</b>
Netpro2vecTM2	<b>1</b>	<b>1</b>	0.697	0.932	0.910	0.947	<b>1</b>
Netpro2vecNDD+TM1	<b>1</b>	<b>1</b>	0.969	<b>1</b>	0.948	<b>1</b>	<b>1</b>
Netpro2vecNDD+TM1+TM2	<b>1</b>	<b>1</b>	0.743	0.942	0.852	0.924	<b>1</b>
Graph2Vec	0.962	0.985	0.969	0.969	<b>0.969</b>	0.954	<b>1</b>
GL2Vec	0.969	0.977	0.962	0.962	<b>0.969</b>	0.954	<b>1</b>
FeatherGraph	0.801	0.721	0.876	0.743	0.6	0.723	0.955

Table 8.2: Table non-T2DM Sensitivity and Specitivity within Normalized Features

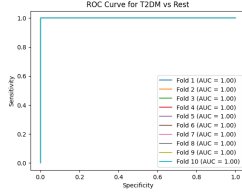
A. non-T2DM Sensitivity							
	SVMl	SVMnl	GNB	KNN	DT	RF	GCN
Gene expression	Rank 3	Rank 2	Rank 7	Rank 6	Rank 5	Rank 4	Rank 1
Netpro2vecMetgraphs	<b>0.969</b>	<b>0.977</b>	0.869	0.931	0.940	0.939	0.909
Netpro2vecNDD	<b>0.969</b>	0.962	0.885	0.931	<b>0.954</b>	<b>0.962</b>	0.909
Netpro2vecTM1	<b>0.969</b>	0.954	0.831	0.931	0.925	0.923	<b>1</b>
Netpro2vecTM2	0.948	0.856	0.796	0.872	0.828	0.782	<b>1</b>
Netpro2vecNDD+TM1	<b>0.969</b>	0.946	0.816	0.925	0.931	0.923	<b>1</b>
Netpro2vecNDD+TM1+TM2	0.948	0.841	0.811	0.925	0.842	0.803	<b>1</b>
Graph2Vec	0.892	0.962	0.885	0.931	0.908	0.923	<b>1</b>
GL2Vec	0.900	0.938	<b>0.900</b>	<b>0.938</b>	0.908	0.923	<b>1</b>
FeatherGraph	0.771	0.763	0.841	0.832	0.809	0.733	<b>1</b>
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	<b>0.969</b>	<b>0.977</b>	0.869	0.931	0.940	0.939	<b>1</b>
Netpro2vecNDD	<b>0.969</b>	0.962	0.885	0.931	<b>0.954</b>	<b>0.962</b>	<b>1</b>
Netpro2vecTM1	<b>0.969</b>	0.954	0.831	0.931	0.925	0.923	<b>1</b>
Netpro2vecTM2	0.948	0.856	0.796	0.872	0.828	0.789	<b>1</b>
Netpro2vecNDD+TM1	<b>0.969</b>	0.946	0.816	0.925	0.931	0.923	<b>1</b>
Netpro2vecNDD+TM1+TM2	0.947	0.841	0.811	0.925	0.842	0.803	<b>1</b>
Graph2Vec	0.9	0.962	0.885	0.931	0.908	0.923	<b>1</b>
GL2Vec	0.915	0.946	<b>0.900</b>	<b>0.938</b>	0.908	0.923	<b>1</b>
FeatherGraph	0.771	0.763	0.841	0.832	0.809	0.733	0.966

Table 8.3: Table Healthy Sensitivity and Specitivity within Normalized Features

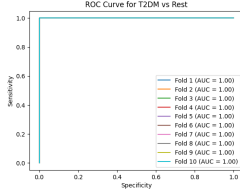
<b>A. Healthy Sensitivity</b>							
	<b>SVMl</b>	<b>SVMnl</b>	<b>GNB</b>	<b>KNN</b>	<b>DT</b>	<b>RF</b>	<b>GCN</b>
<b>Gene expression</b>	<b>Rank 3</b>	<b>Rank 6</b>	<b>Rank 5</b>	<b>Rank 2</b>	<b>Rank 4</b>	<b>Rank 7</b>	<b>Rank 1</b>
Netpro2vecMetgraphs	0.969	0.797	0.788	0.971	0.948	0.919	<b>1</b>
Netpro2vecNDD	0.963	0.782	0.812	0.977	0.932	0.890	<b>1</b>
Netpro2vecTM1	<b>0.979</b>	0.919	0.818	0.977	0.895	<b>0.926</b>	<b>1</b>
Netpro2vecTM2	0.962	<b>0.933</b>	0.872	0.821	0.797	0.842	<b>1</b>
Netpro2vecNDD+TM1	0.992	0.754	0.765	<b>0.985</b>	0.919	0.812	<b>1</b>
Netpro2vecNDD+TM1+TM2	<b>0.979</b>	0.926	0.857	0.759	0.768	0.841	<b>1</b>
Graph2Vec	0.932	0.765	0.949	0.947	0.934	0.911	<b>1</b>
GL2Vec	0.940	0.777	<b>0.954</b>	0.969	<b>0.962</b>	<b>0.926</b>	<b>1</b>
FeatherGraph	0.666	0.674	0.441	0.583	0.568	0.774	0.909

<b>B. Healthy Specitivity</b>							
	<b>SVMl</b>	<b>SVMnl</b>	<b>GNB</b>	<b>KNN</b>	<b>DT</b>	<b>RF</b>	<b>GCN</b>
<b>Gene expression</b>	<b>Rank 2</b>	<b>Rank 6</b>	<b>Rank 5</b>	<b>Rank 3</b>	<b>Rank 4</b>	<b>Rank 7</b>	<b>Rank 1</b>
Netpro2vecMetgraphs	0.969	0.797	0.788	0.971	0.948	0.919	0.966
Netpro2vecNDD	0.963	0.784	0.812	<b>0.977</b>	0.932	0.890	<b>1</b>
Netpro2vecTM1	0.977	0.919	0.818	<b>0.977</b>	0.895	0.926	<b>1</b>
Netpro2vecTM2	0.962	<b>0.933</b>	0.872	0.821	0.797	0.842	<b>1</b>
Netpro2vecNDD+TM1	<b>0.992</b>	0.769	0.765	0.985	0.919	0.812	<b>1</b>
Netpro2vecNDD+TM1+TM2	0.979	0.926	0.857	0.729	0.768	0.841	<b>1</b>
Graph2Vec	0.932	0.771	0.949	0.947	0.934	0.911	<b>1</b>
GL2Vec	0.940	0.777	<b>0.954</b>	0.969	<b>0.962</b>	<b>0.926</b>	<b>1</b>
FeatherGraph	0.666	0.674	0.441	0.583	0.568	0.774	0.966

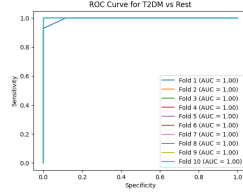
# 1 ROC Chart for T2DM in Normalized Feature Including Ranking Order



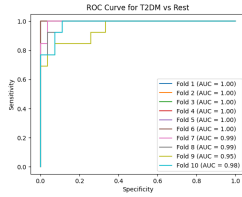
(a) SVMl/Rank 2



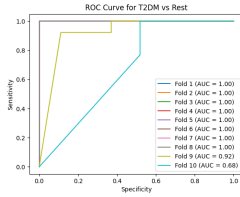
(b) SVMnl/Rank 3



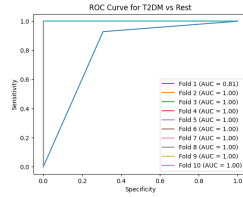
(c) KNN/Rank 4



(d) RF/Rank 5

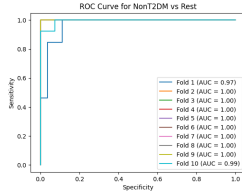


(e) GNB/Rank 6

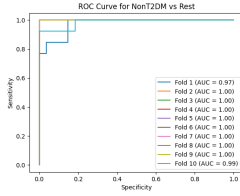


(f) DT/Rank 7

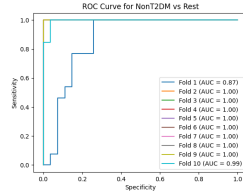
# 2 ROC Chart for non-T2DM in Normalized Feature Including Ranking Order



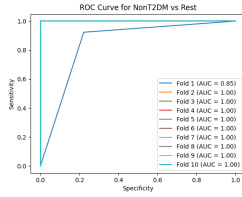
(a) SVMnl/Rank 2



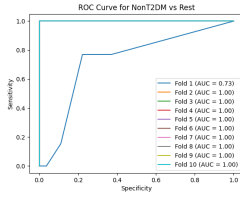
(b) SVMl/Rank 3



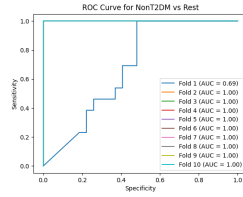
(c) RF/Rank 4



(d) DT/Rank 5

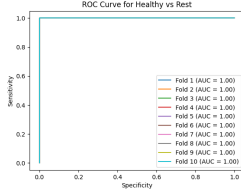


(e) KNN/Rank 6

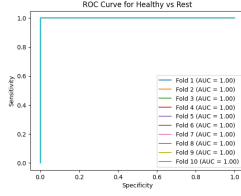


(f) GNB/Rank 7

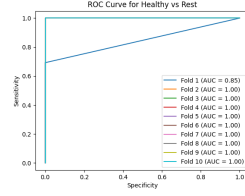
### 3 ROC Chart for Healthy in Normalized Feature Including Ranking Order



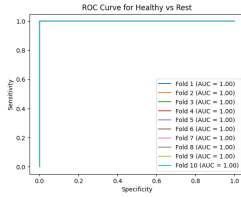
(a) KNN/Rank 2



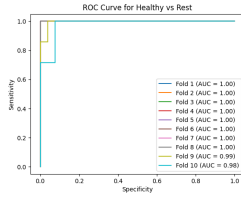
(b) SVMl/Rank 3



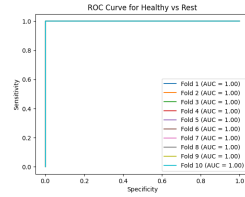
(c) DT/Rank 4



(d) GNB/Rank 5



(e) SVMnl/Rank 6



(f) RF/Rank 7