\begin{table}[ht!]

\centering

\caption{ACC measure of GMM intestinal metagenomics data studies with other studies.} \label{tab:bang6}

\begin{tabular}{|r|r|r|r|r|r|r|r|r|}

\hline

\multicolumn{1}{|l|}{ \textbf{ Bins } } & \multicolumn{2}{l|}{\textbf{ GMM } } & \multicolumn{2}{l|}{\textbf{ MetAML } } & \multicolumn{2}{l|}{\textbf{ RegMIL } } & \multicolumn{2}{l|}{\textbf{ Met2Img } } \\ \hline

Model & RF & SVM & RF & SVM & RF

& SVM & RF & SVM

\\ \hline

Chatelier gut \\ obesity & 0.48600

& 0.48100 & 0.64400 & 0.63600 & - & - & 0.64500 &0.64800

\\ \hline

metahitIBD & 0.86000 & 0.82700 & 0.80900 & 0.80900

& 0.84660 & 0.82370 & 0.80800

& 0.75500

\\ \hline

Quin gut liver \\cirrhosis & 0.87500 & 0.80200

& 0.87700 & 0.83400 & 0.92810

& 0.89500 & 0.87700 & 0.50900

\\ \hline

T2D & 0.71100 & 0.57900 & 0.66400 & 0.61300 & - & - & 0.67200 & 0.51500

\\ \hline

WT2D & 0.04100 & 0.37200 & 0.70300 & 0.59600 & - & - & 0.70300 & 0.55300

\\ \hline

Zeller fecal \\colorectal \\cancer & 0.17200

& 0.39600 & 0.80500 & 0.74300 & - & -

& 0.81200 & 0.60300

\\ \hline

\end{tabular}

\end{table}

\begin{table}[ht!]

\centering

\caption{Compare AUC and ACC performance of GMM, binning GMM with RF and SVM.} \label{tab:bang3}

\begin{tabular}{|r|r|r|r|r|r|r|}

\hline

\multicolumn{1}{|l|}{ \textbf{ Dataset } } & \multicolumn{2}{l|}{\textbf{ GMM } } & \multicolumn{2}{l|}{\textbf{ GMM(RF) } } & \multicolumn{2}{l|}{\textbf{ GMM(SVM) } } \\ \hline

& ACC & AUC & ACC & AUC

& ACC & AUC

\\ \hline

Chatelier gut \\ obesity & 0.59300 &0.76600 & 0.48600 & 0.65900

& 0.48100 & 0.52400

\\ \hline

metahitIBD & 0.84600 &0.92100 & 0.86000 & 0.86100

& 0.82700 & 0.81100

\\ \hline

Quin gut liver \\cirrhosis

& 0.85800 &0.92100

& 0.87500 & 0.87900

& 0.80200 & 0.80300

\\ \hline

T2D & 0.66600 &0.73600 & 0.71100 & 0.71400

& 0.57900 & 0.57700

\\ \hline

WT2D & 0.43500 &0.61000 & 0.04100 & 0.51400

& 0.37200 & 0.57000

\\ \hline

Zeller fecal \\colorectal cancer & 0.52300 &0.74300 & 0.17200 & 0.57400

& 0.39600 & 0.59100

\\ \hline

\end{tabular}

\end{table}

\begin{table}[ht!]

\centering

\caption{Compare raw data and GMM performance.} \label{tab:bang4}

\begin{tabular}{|r|r|r|r|r|}

\hline

\multicolumn{1}{|l|}{ \textbf{ Dataset } } & \multicolumn{2}{l|}{\textbf{ GMM } } & \multicolumn{2}{l|}{\textbf{ raw } }

\\ \hline

& ACC & AUC & ACC

& AUC

\\ \hline

Chatelier gut obesity & 0.59300 &0.76600 & 0.55700 & 0.73400

\\ \hline

metahitIBD & 0.84600 &0.92100 & 0.84600 & 0.91800

\\ \hline

Quin gut liver cirrhosis

& 0.85800 &0.92100 & 0.77600 & 0.86700

\\ \hline

T2D & 0.66600 &0.73600 & 0.64200 & 0.74800

\\ \hline

WT2D & 0.43500 &0.61000 & 0.60700 & 0.80900

\\ \hline

Zeller fecal colorectal cancer & 0.52300 &0.74300 & 0.45000 & 0.67400

\\ \hline

\end{tabular}

\end{table}