IS 482/682 Data Mining Lab (BI Tutorial #5)

In this lab, you will learn the basic of data mining. Before starting the first Learn By Doing Exercise, read all of Chapter 15 (pgs. 598-622). This chapter gives an overview of the different algorithms available in Microsoft’s Data Mining package and how they can be applied to business situations.

1. Complete “Learn By Doing- Defining a Data Mining Model” (pgs. 626-639). You will need to modify steps 5-12 at the beginning of the exercise to the following:
   a. Click on File in the menu, navigate to Open and select Analysis Services Database.
   b. Enter the ISSQL\Students for the server name.
   c. There will be a copy of the Max Min Sales DM Sales analysis services project under your name. Please use the Analysis Services database with your NetID that ends in Sales. The example below shows the name of the database for rdittmer. Your database will have your NetID at the start of the database name.
   d. Click OK to bring up your Analysis Services project.

2. Complete the section called “Mining Model Viewer” (pgs. 640-656) As the book says, this whole section is really a Learn By Doing tutorial. Follow along with the book as it reviews the data models created in the previous activity. There aren’t many specific tasks for this section – primarily you will look at the different aspects of data mining available via SQL Server.
   a. Note - the Neural Network mining model viewer does not work.

3. Complete the section called “Mining Accuracy Chart” (pgs. 658-669). This section introduces the Mining Accuracy Chart tab including the following subsections:
   a. Column Mapping
   b. Lift Chart
   c. Profit Chart
   d. Classification Matrix
   e. Cross Validation
   Read each of these sections and follow along with any steps.

4. Complete “Learn by Doing- Mining Model Prediction Creating a Singleton Query” (pgs. 670-674). In this section, you will use a singleton query to predict how many children are at home based upon input you give to the query.
5. Complete “Learn by Doing- Creating a Prediction Join Query” (pgs. 674-680). In this section, you will use prediction join to create a mailing list for a marketing campaign. Note the following modifications:
   a. Do not enter MythicWorldMailing for the table name when saving the query results. Instead, use the naming convention NetIDPrediction where NetID below would be your own NetID.

![Image of Save Data Mining Query Result dialog box]

6. Read the section called “Data Mining Extensions” (pgs. 681-685). This section goes over how to create prediction queries in SQL Server Management Studio.

7. Complete “Learn by Doing- Creating a Query in the SQL Server Management Studio” (pgs. 685-688). Note the following modification.
   a. Use the Analysis Services project with your NetID when you run your queries.