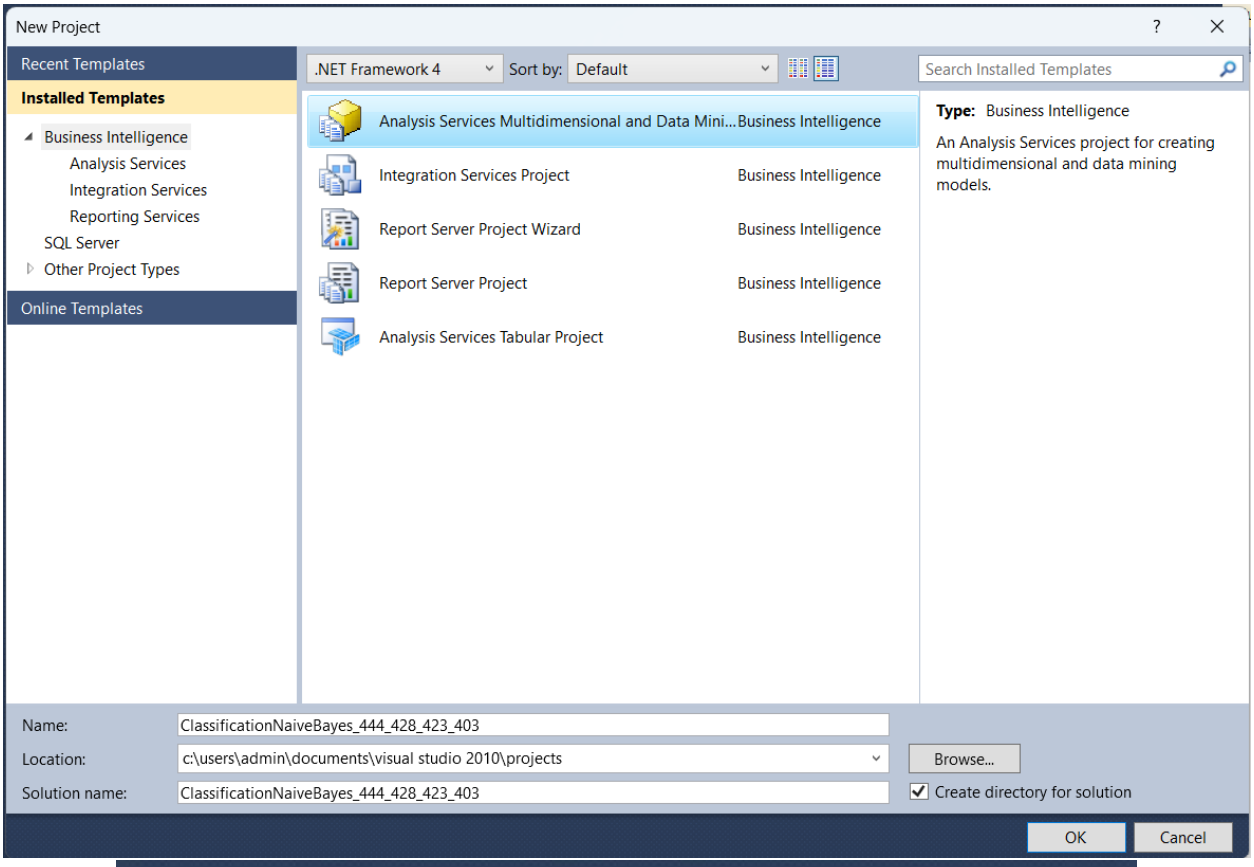
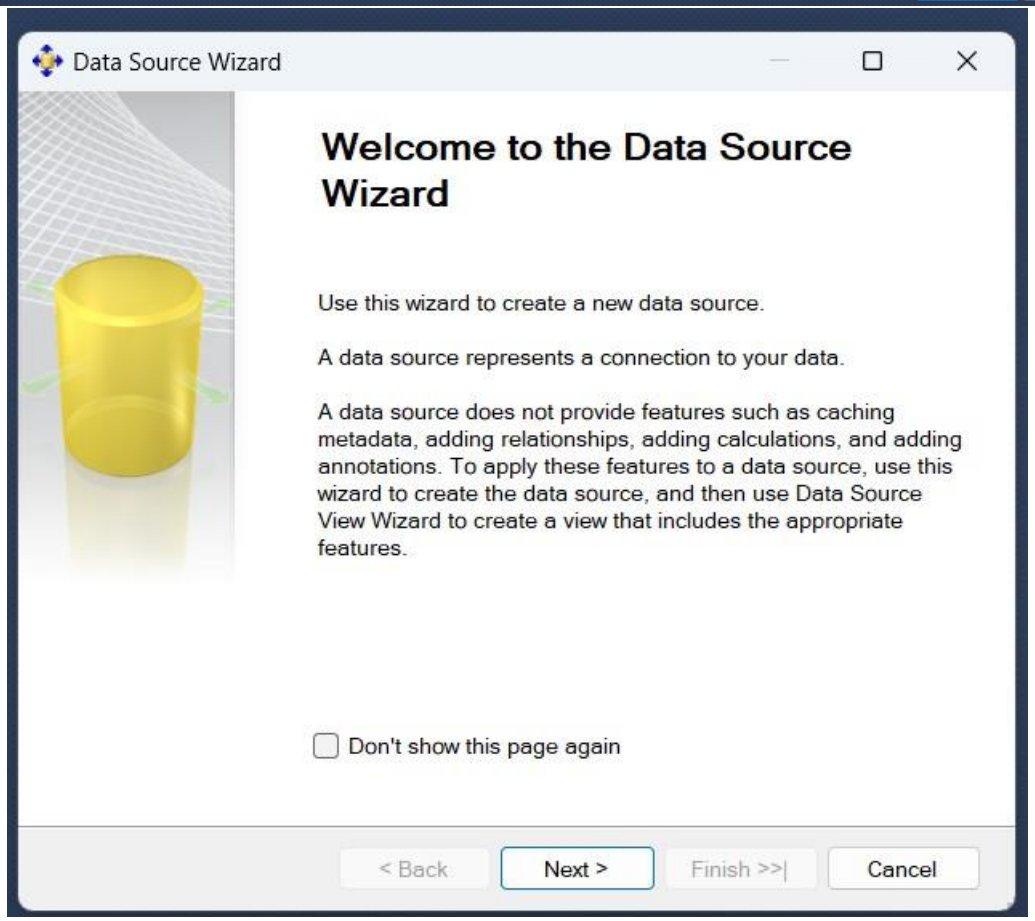
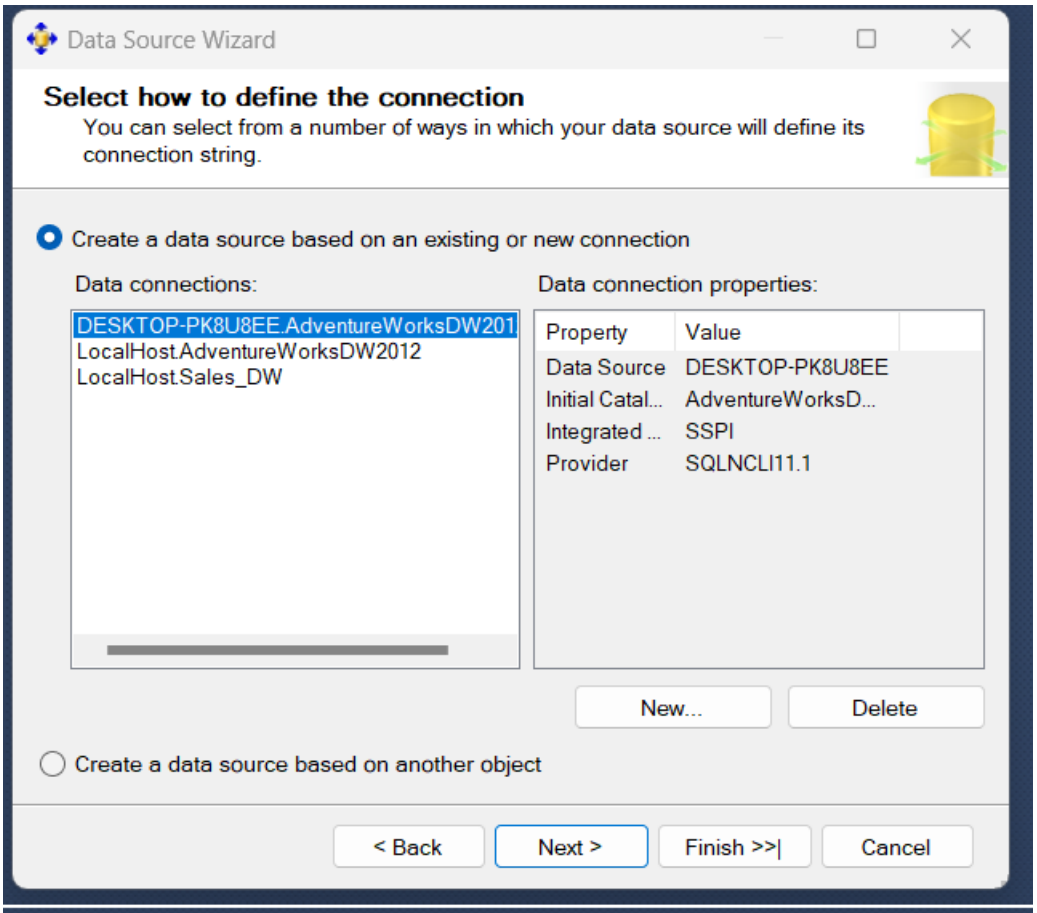
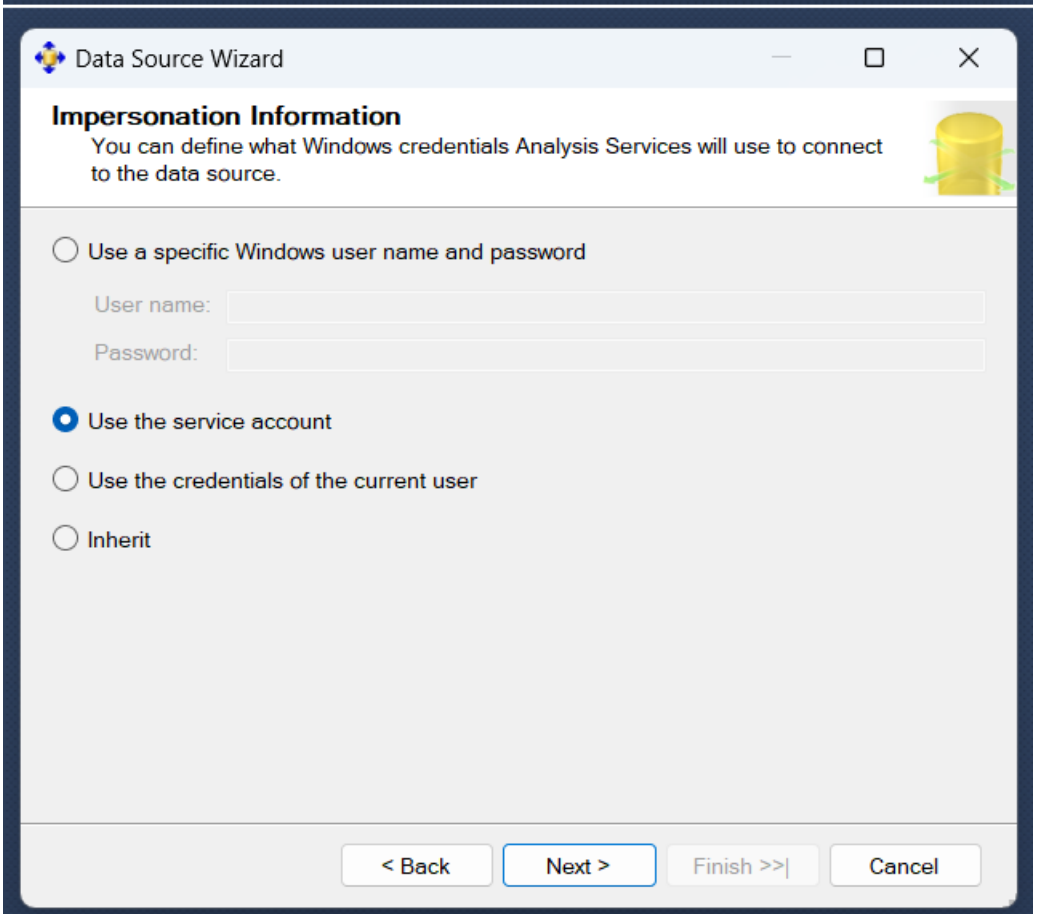
Practical-10

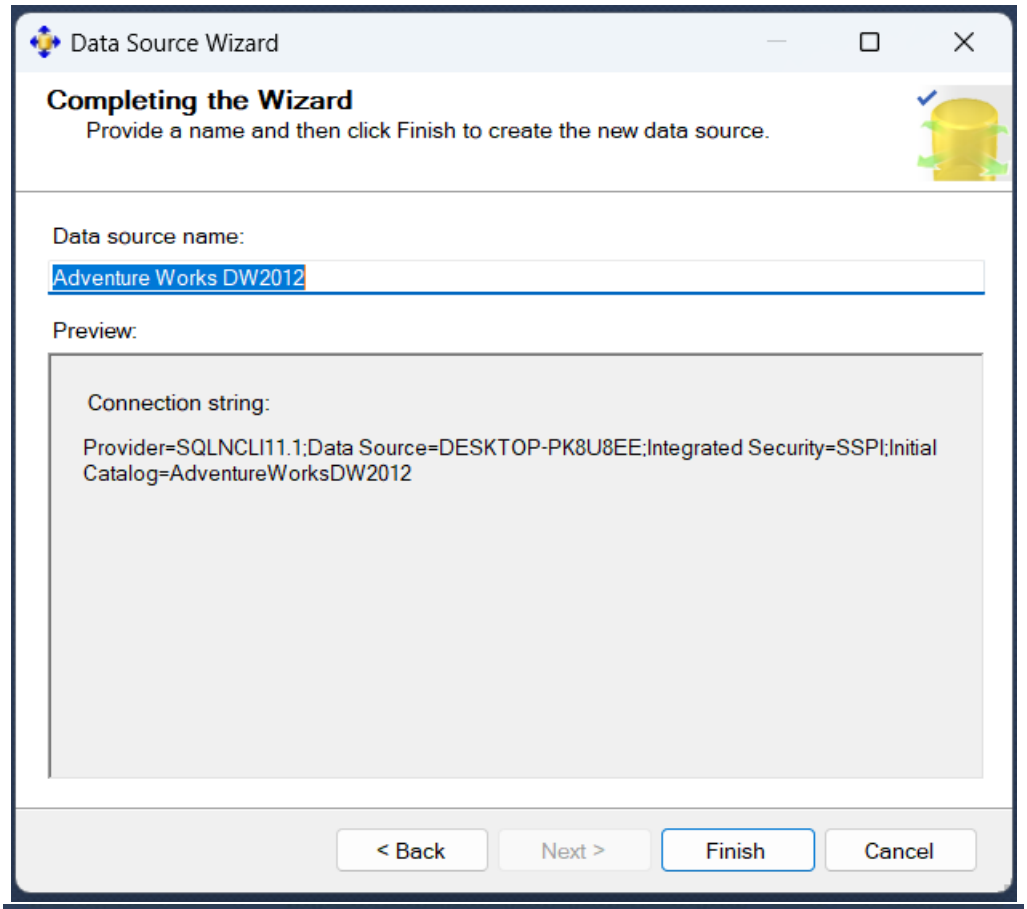
Aim: Naïve Bayes

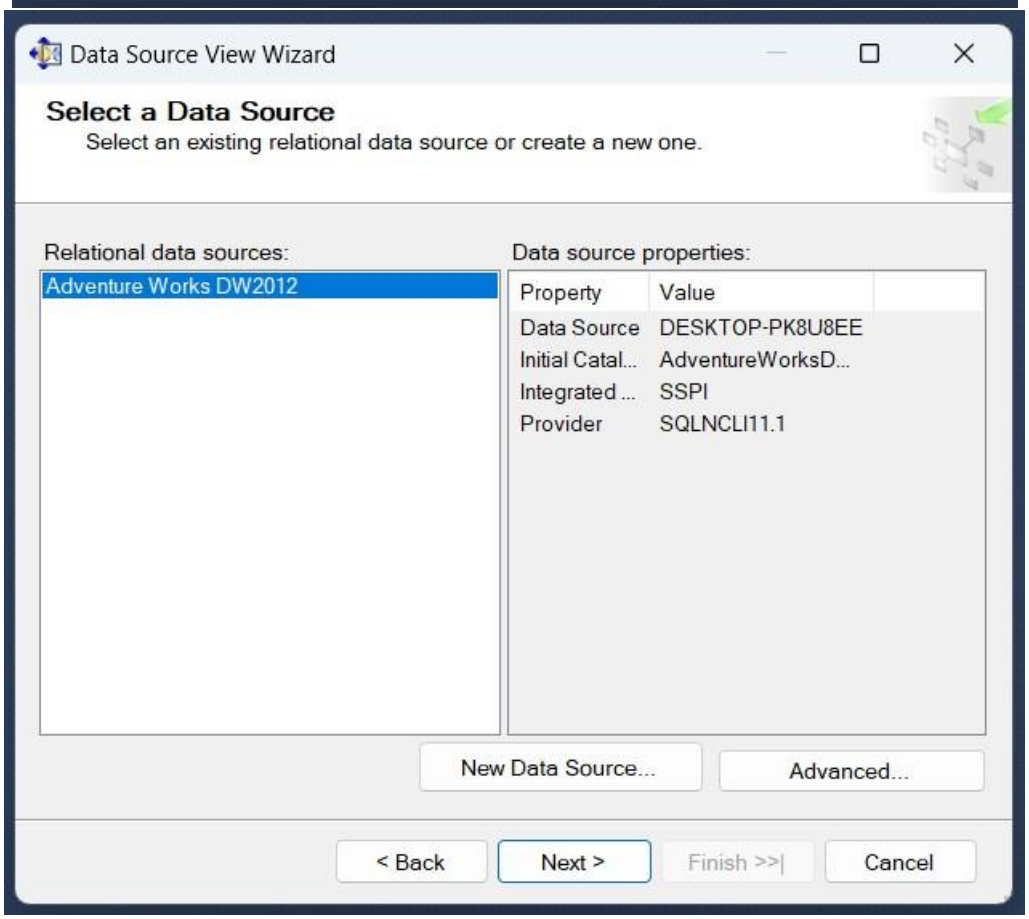


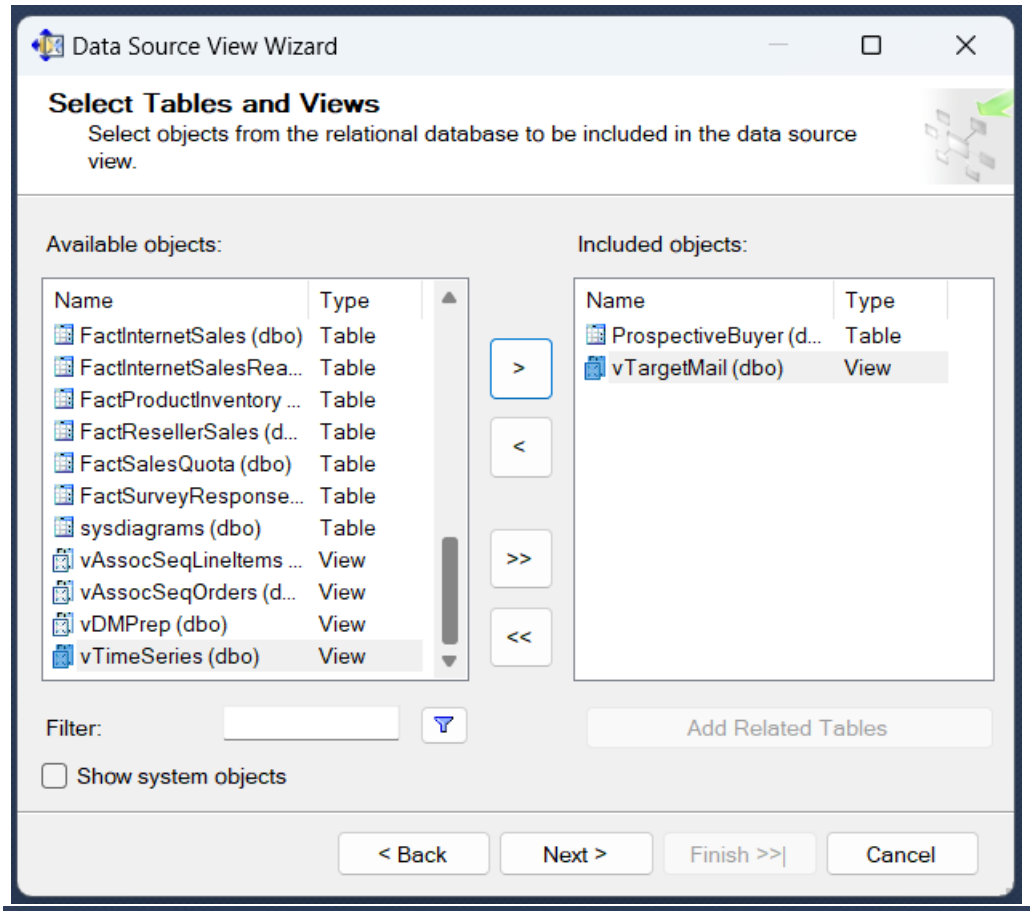


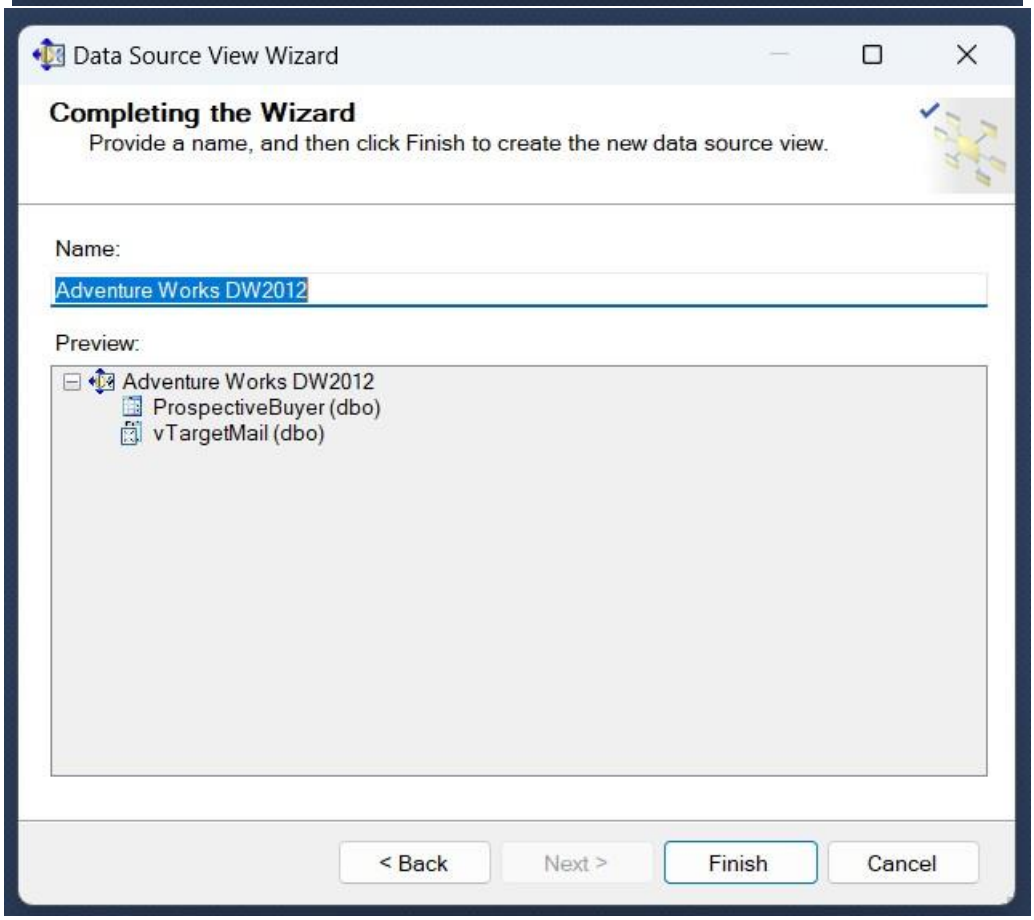

Data Source Wizard
Select how to define the connection
You can select from a number of ways in which your data source will define its connection string.
Create a data source based on an existing or new connection
Data connections:
DESKTOP-PK8U8EE.AdventureWorksDW201
LocalHost.AdventureWorksDW2012
LocalHost.Sales_DW
Data connection properties:
Property
Value
Data Source
DESKTOP-PK8U8EE
Initial Catal...
AdventureWorksD...
Integrated ...
SSPI
Provider
SQLNCLI11.1
New...
Delete
Create a data source based on another object
< Back
Next >
Finish >>|
Cancel


Data Source Wizard
Impersonation Information
You can define what Windows credentials Analysis Services will use to connect to the data source.
Use a specific Windows user name and password
User name:
Password:
Use the service account
Use the credentials of the current user
Inherit
< Back
Next >
Finish >>|
Cancel


Data Source Wizard
Completing the Wizard
Provide a name and then click Finish to create the new data source.
Data source name:
Adventure Works DW2012
Preview:
Connection string:
Provider=SQLNCLI11.1;Data Source=DESKTOP-PK8U8EE;Integrated Security=SSPI;Initial Catalog=AdventureWorksDW2012
< Back
Next >
Finish
Cancel


Data Source View Wizard
Select a Data Source
Select an existing relational data source or create a new one.
Relational data sources:
Adventure Works DW2012
Data source properties:
Property
Value
Data Source
DESKTOP-PK8U8EE
Initial Catal...
AdventureWorksD...
Integrated ...
SSPI
Provider
SQLNCLI11.1
New Data Source...
Advanced...
< Back
Next >
Finish >>|
Cancel


Data Source View Wizard
Select Tables and Views
Select objects from the relational database to be included in the data source view.
Available objects:
Name
Type
FactInternetSales (dbo)
Table
FactInternetSalesRea...
Table
FactProductInventory ...
Table
FactResellerSales (d...
Table
FactSalesQuota (dbo)
Table
FactSurveyResponse...
Table
sysdiagrams (dbo)
Table
vAssocSeqLineItems ...
View
vAssocSeqOrders (d...
View
vDMPrep (dbo)
View
vTimeSeries (dbo)
View
>
<
>>
<<
Included objects:
Name
Type
ProspectiveBuyer (d...
Table
vTargetMail (dbo)
View
Filter:
Add Related Tables
Show system objects
< Back
Next >
Finish >>|
Cancel


Data Source View Wizard
Completing the Wizard
Provide a name, and then click Finish to create the new data source view.
Name:
Adventure Works DW2012
Preview:
Adventure Works DW2012
ProspectiveBuyer (dbo)
vTargetMail (dbo)
< Back
Next >
Finish
Cancel

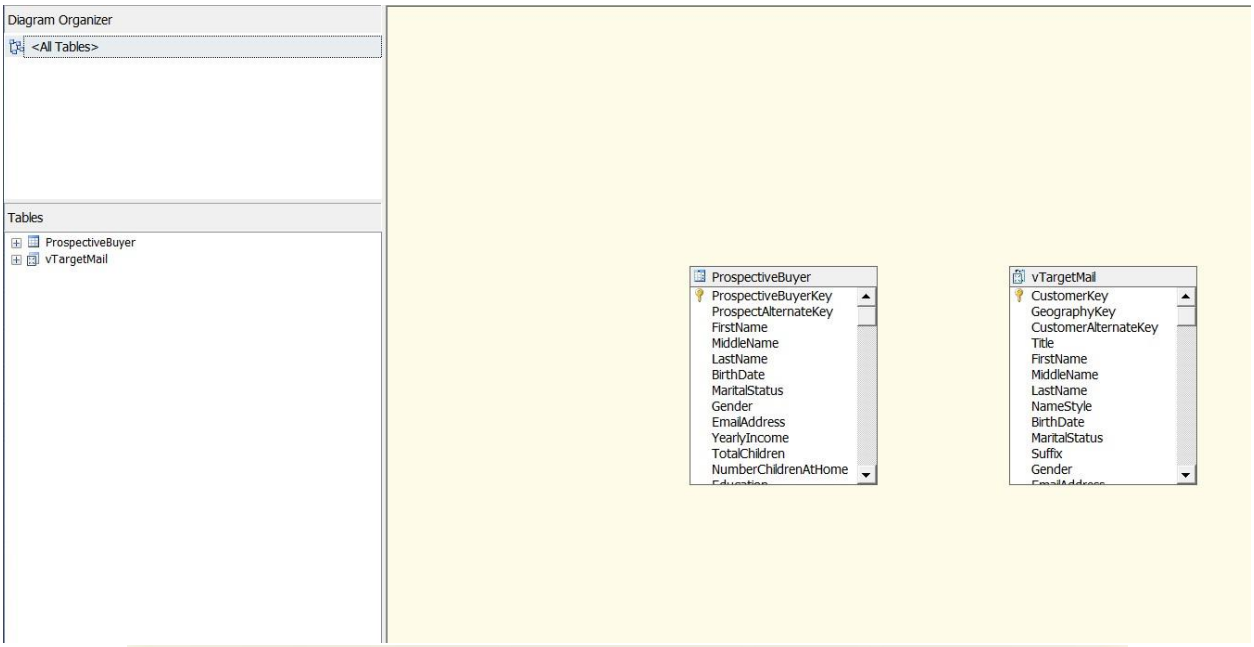
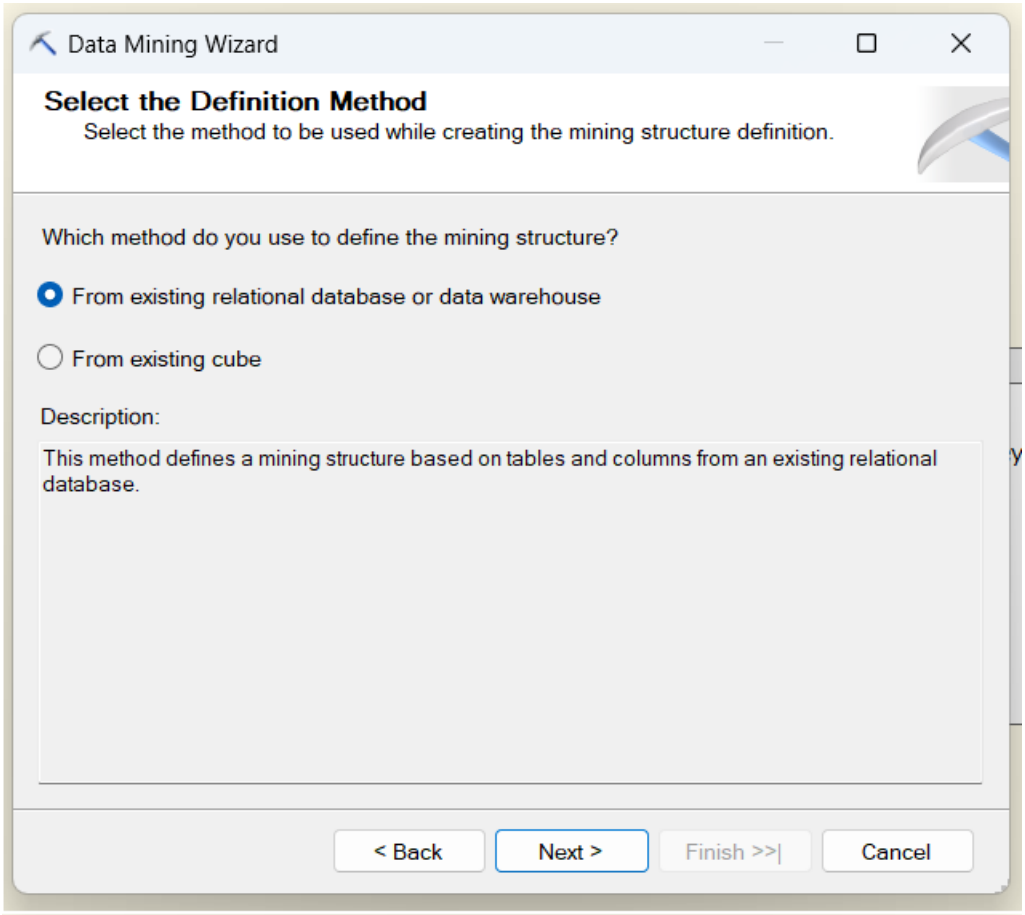
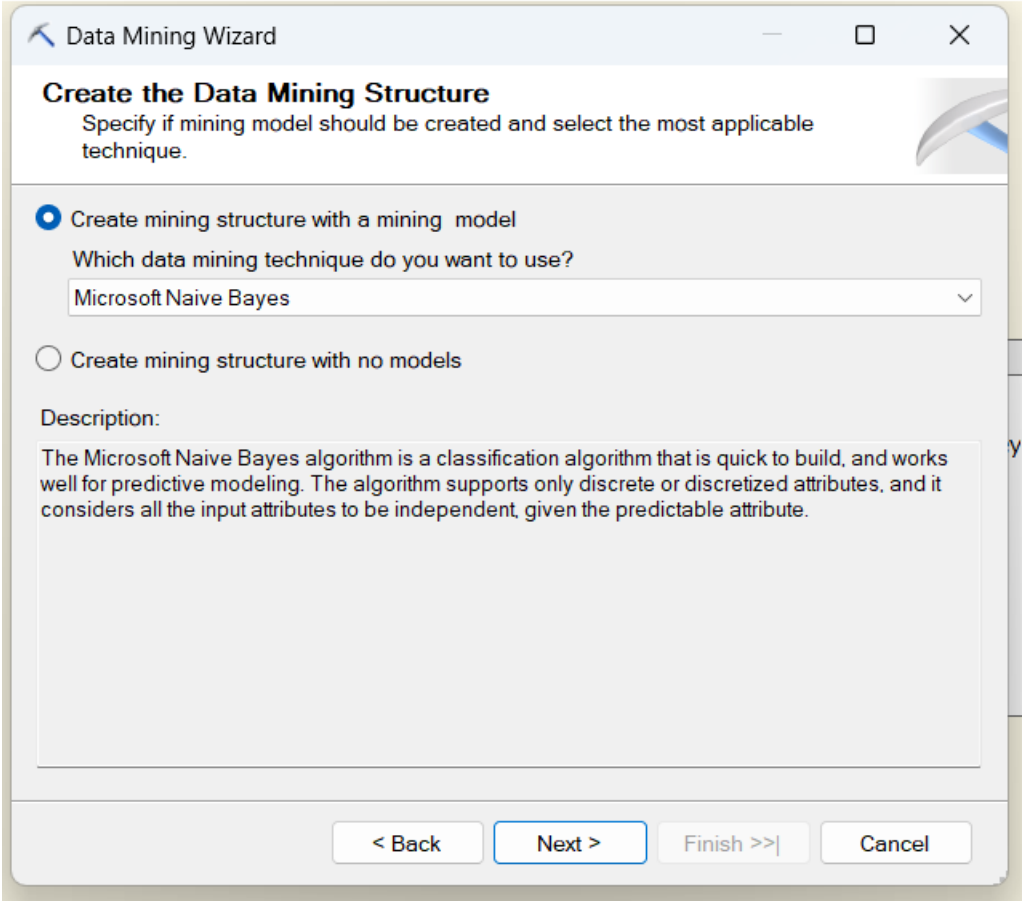
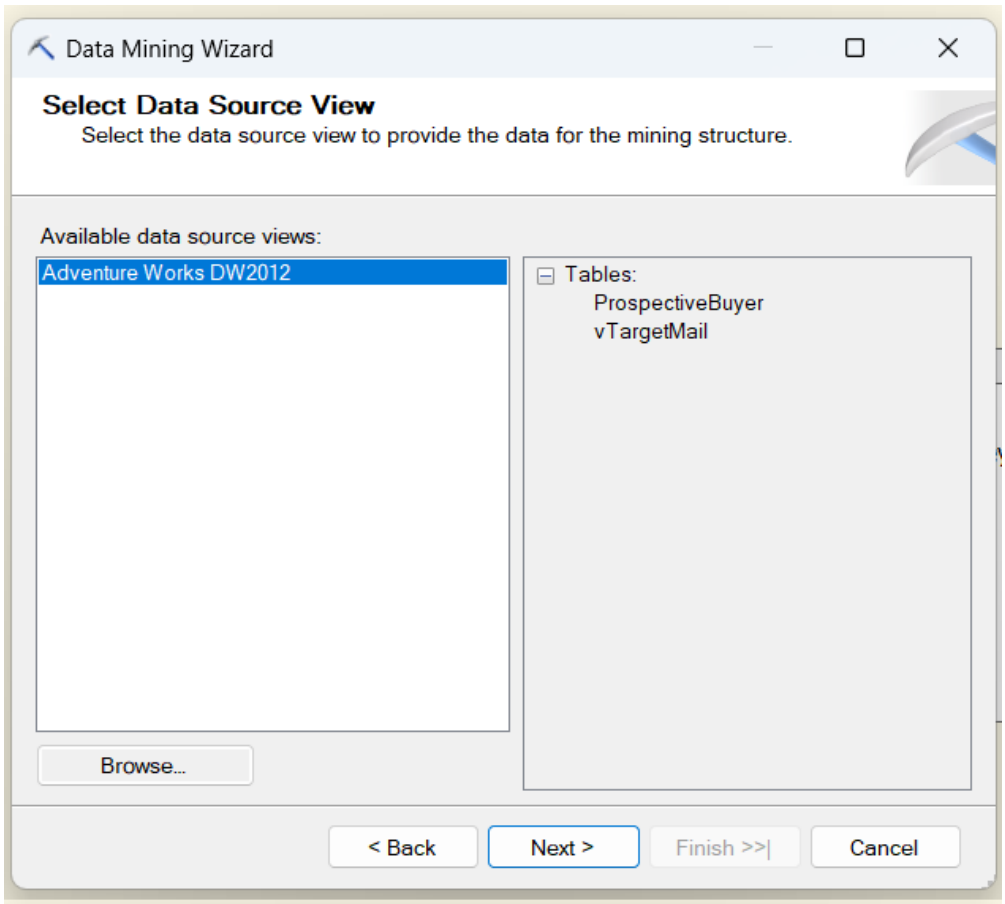


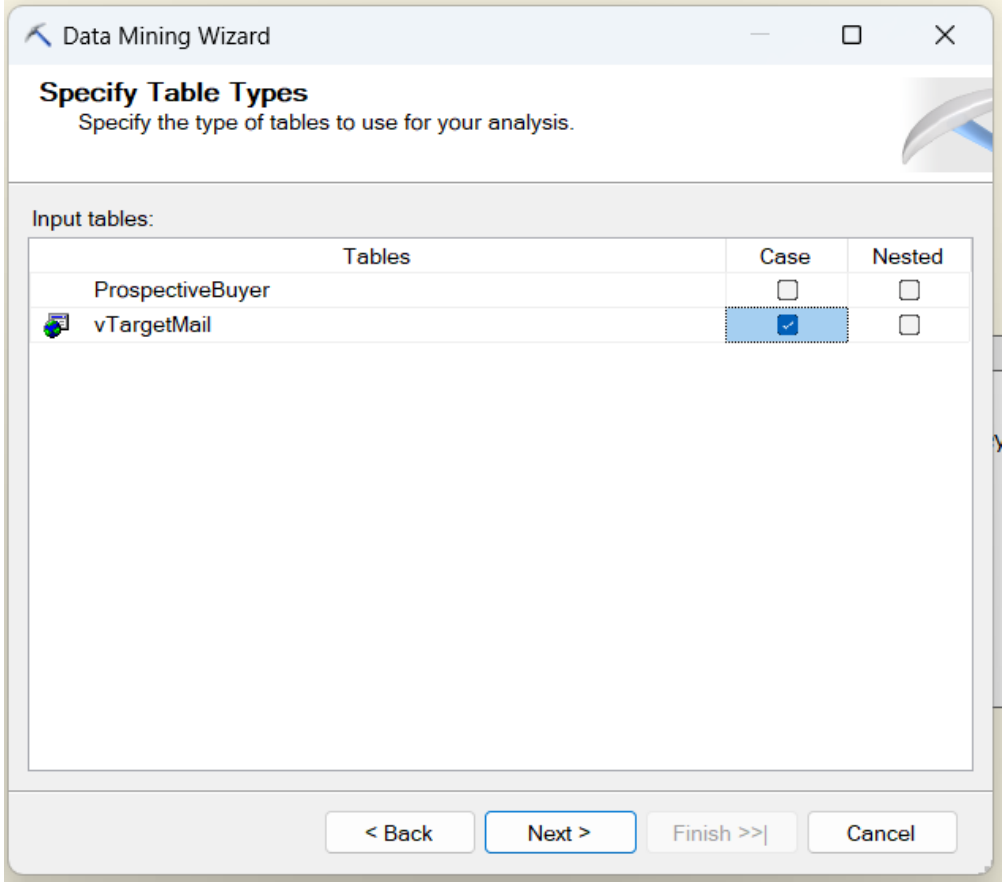
Diagram Organizer
<All Tables>
Tables
ProspectiveBuyer
vTargetMail
ProspectiveBuyer
ProspectiveBuyerKey
ProspectAlternateKey
FirstName
MiddleName
LastName
BirthDate
MaritalStatus
Gender
EmailAddress
YearlyIncome
TotalChildren
NumberChildrenAtHome
vTargetMail
CustomerKey
GeographyKey
CustomerAlternateKey
Title
FirstName
MiddleName
LastName
NameStyle
BirthDate
MaritalStatus
Suffix
Gender

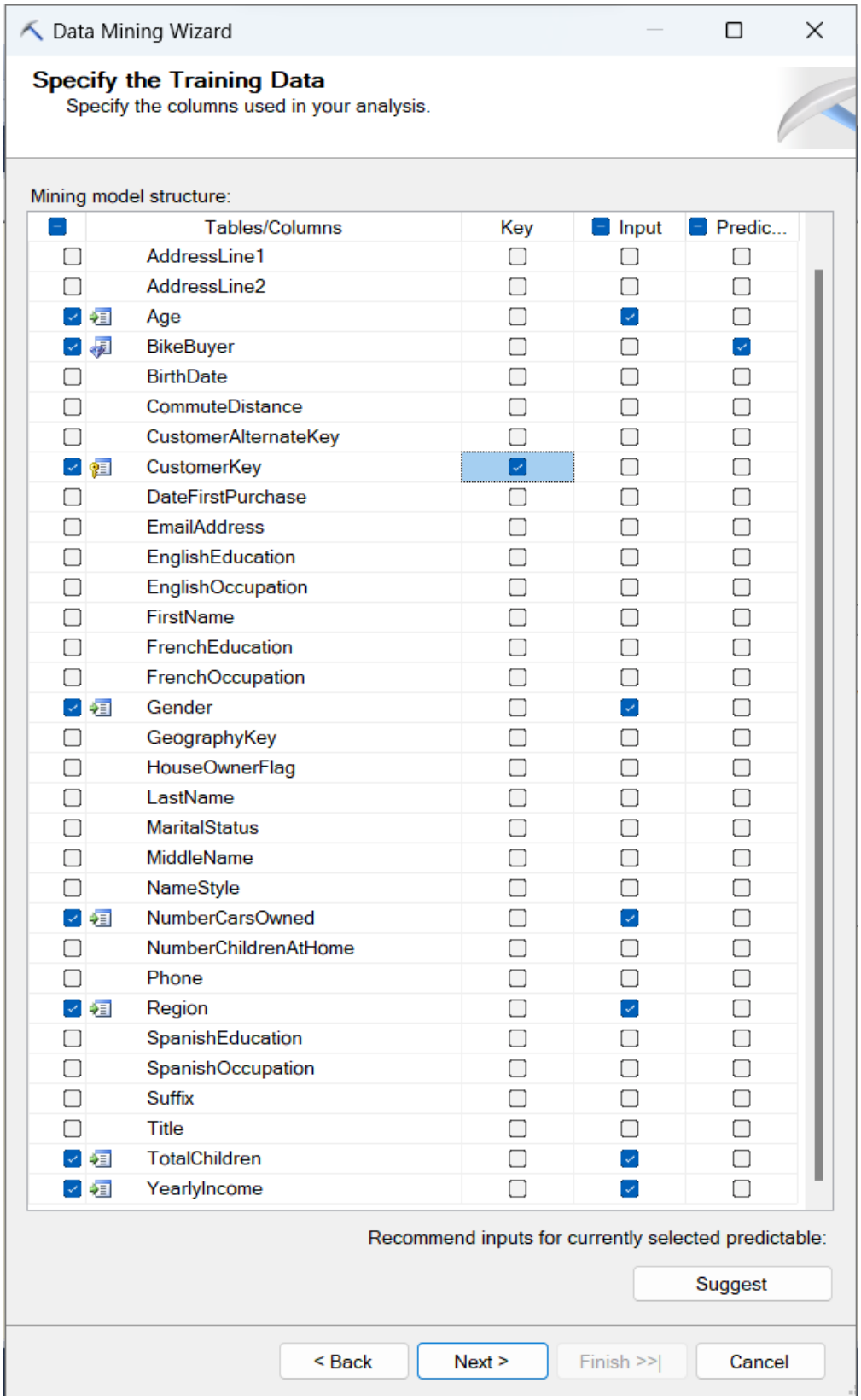

Data Mining Wizard
Welcome to the Data Mining Wizard
Use this wizard to create a new mining structure and a new mining model. A mining structure is a data structure that represents discovered knowledge based on analysis of OLAP or relational data. A mining model can be used to make predictions, if supported by the data mining technique used to create the mining model.
Click Next to build a mining structure and a mining model, or Cancel to exit the wizard.
Don't show this page again
< Back
Next >
Finish >>|
Cancel

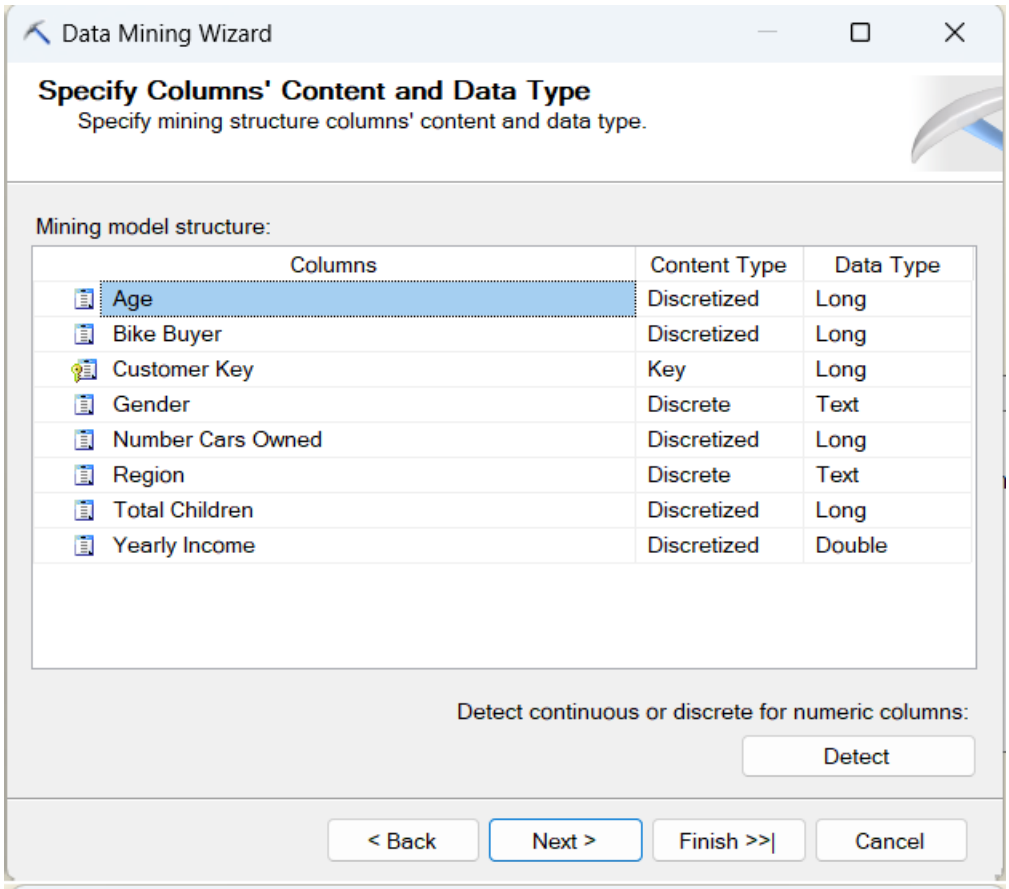

Data Mining Wizard
Select the Definition Method
Select the method to be used while creating the mining structure definition.
Which method do you use to define the mining structure?
From existing relational database or data warehouse
From existing cube
Description:
This method defines a mining structure based on tables and columns from an existing relational database.
< Back
Next >
Finish >>|
Cancel

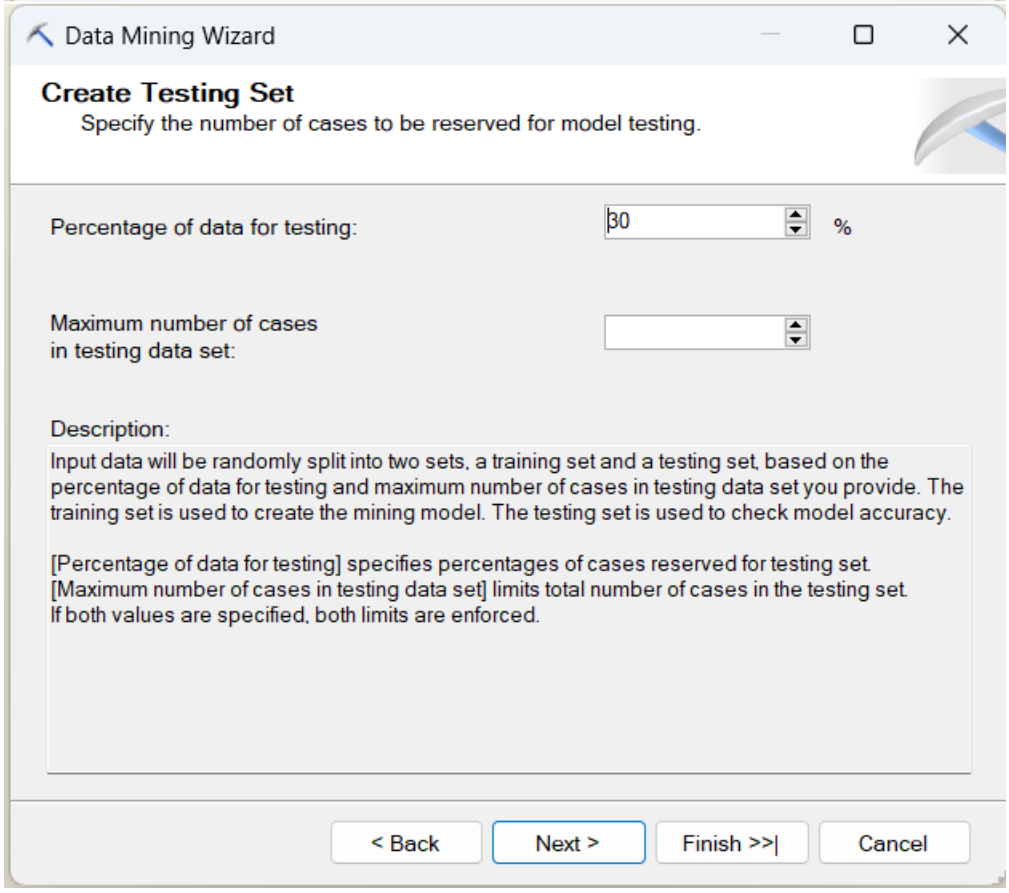

Data Mining Wizard
Create the Data Mining Structure
Specify if mining model should be created and select the most applicable technique.
Create mining structure with a mining model
Which data mining technique do you want to use?
Microsoft Naive Bayes
Create mining structure with no models
Description:
The Microsoft Naive Bayes algorithm is a classification algorithm that is quick to build, and works well for predictive modeling. The algorithm supports only discrete or discretized attributes, and it considers all the input attributes to be independent, given the predictable attribute.
< Back
Next >
Finish >>|
Cancel

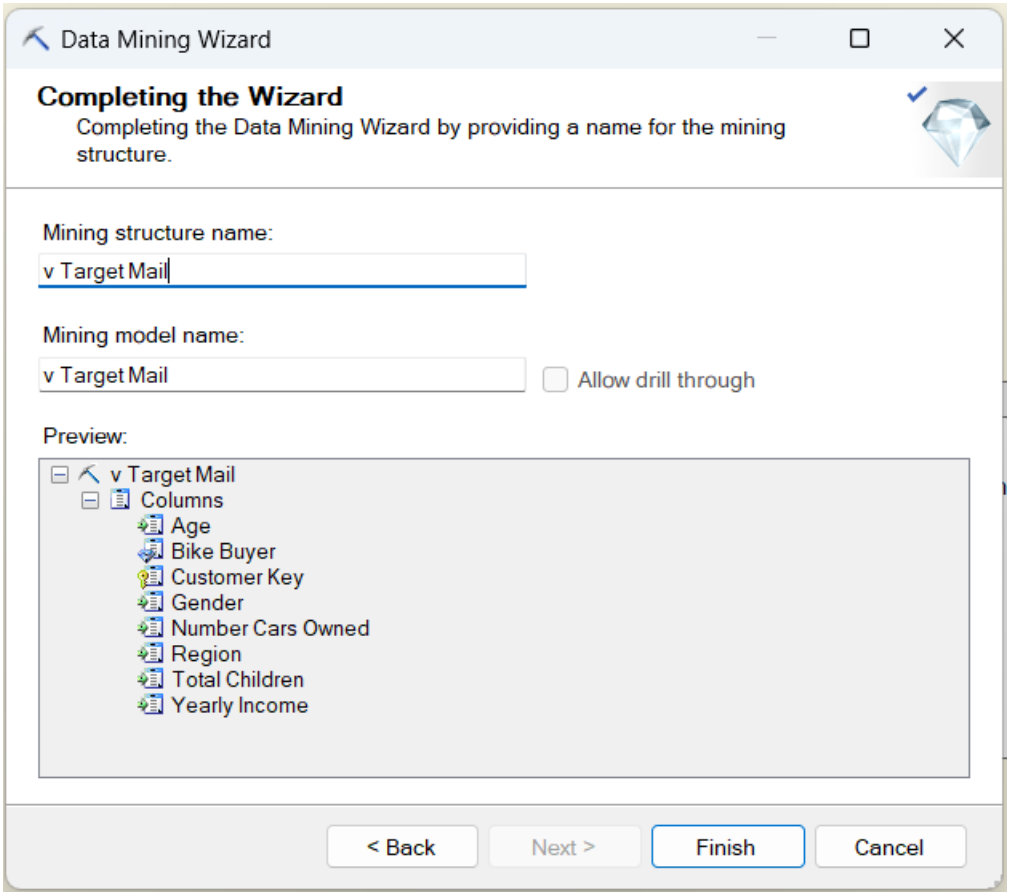

Data Mining Wizard
Select Data Source View
Select the data source view to provide the data for the mining structure.
Available data source views:
Adventure Works DW2012
Tables:
ProspectiveBuyer
vTargetMail
Browse...
< Back
Next >
Finish >>|
Cancel

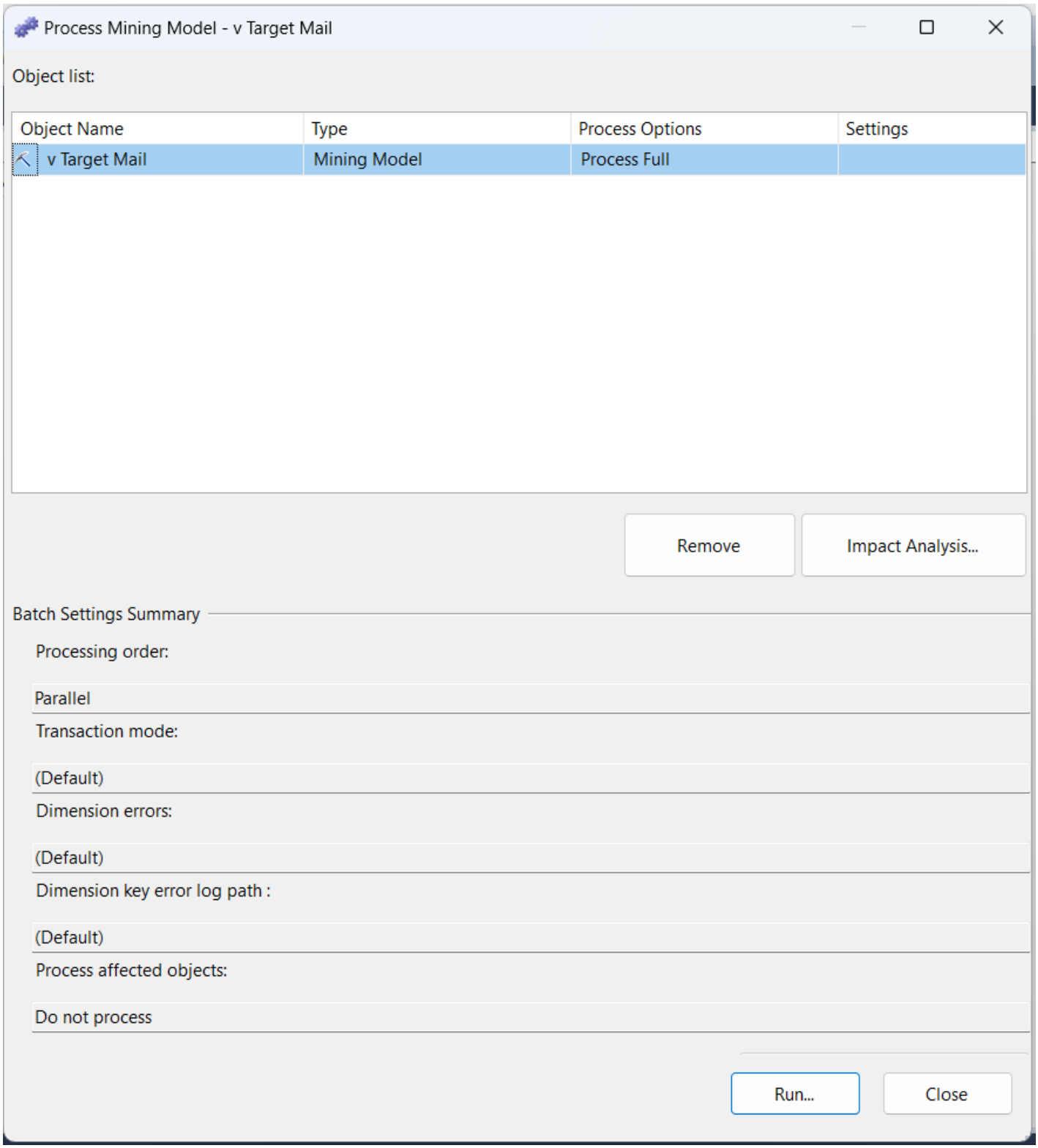

Data Mining Wizard
Specify Table Types
Specify the type of tables to use for your analysis.
Input tables:
Tables
Case
Nested
ProspectiveBuyer
vTargetMail
< Back
Next >
Finish >>|
Cancel

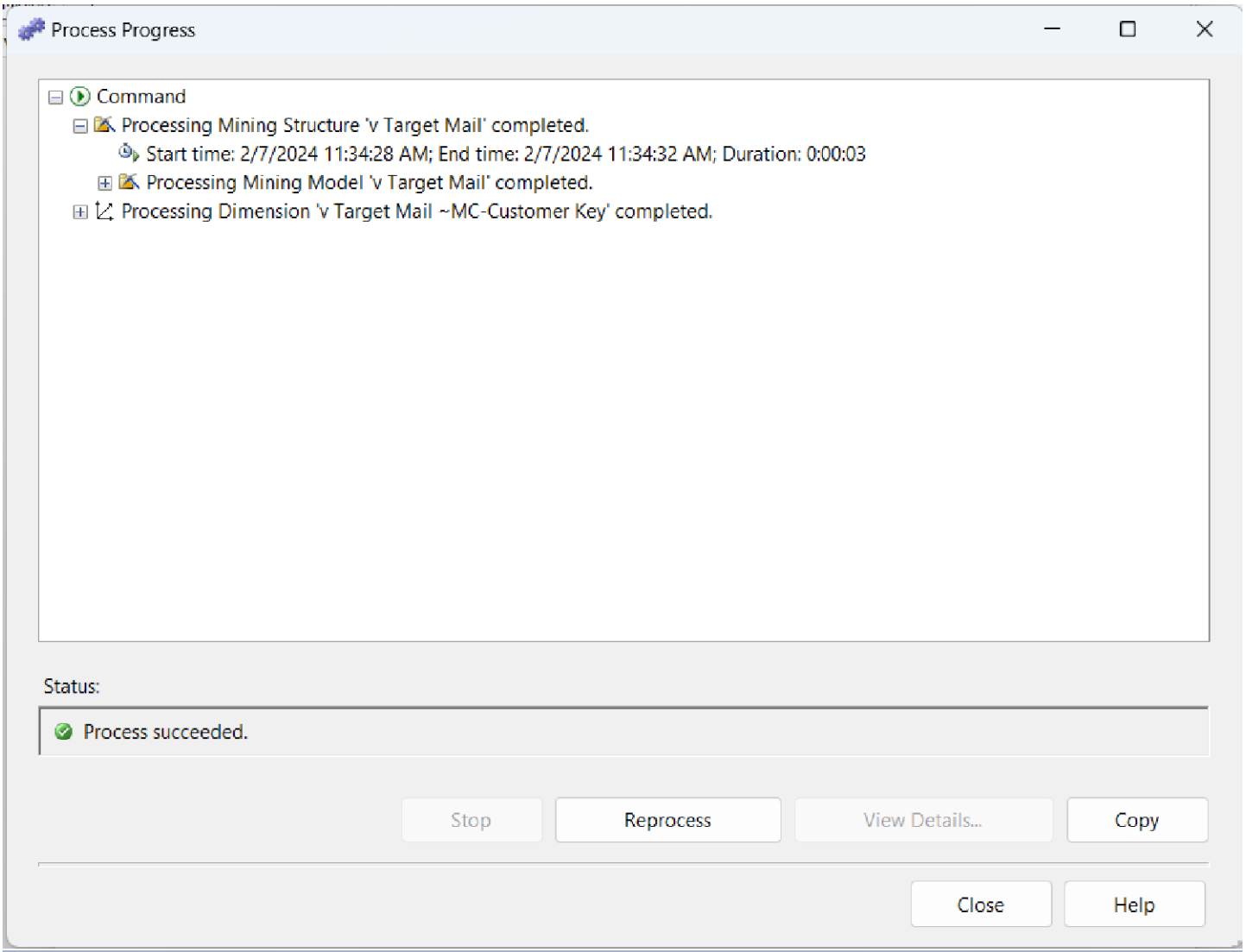

Data Mining Wizard
Specify the Training Data
Specify the columns used in your analysis.
Mining model structure:
Tables/Columns
Key
Input
Predic...
AddressLine1
AddressLine2
Age
BikeBuyer
BirthDate
CommuteDistance
CustomerAlternateKey
CustomerKey
DateFirstPurchase
EmailAddress
EnglishEducation
EnglishOccupation
FirstName
FrenchEducation
FrenchOccupation
Gender
GeographyKey
HouseOwnerFlag
LastName
MaritalStatus
MiddleName
NameStyle
NumberCarsOwned
NumberChildrenAtHome
Phone
Region
SpanishEducation
SpanishOccupation
Suffix
Title
TotalChildren
YearlyIncome
Recommend inputs for currently selected predictable:
Suggest
< Back
Next >
Finish >>|
Cancel

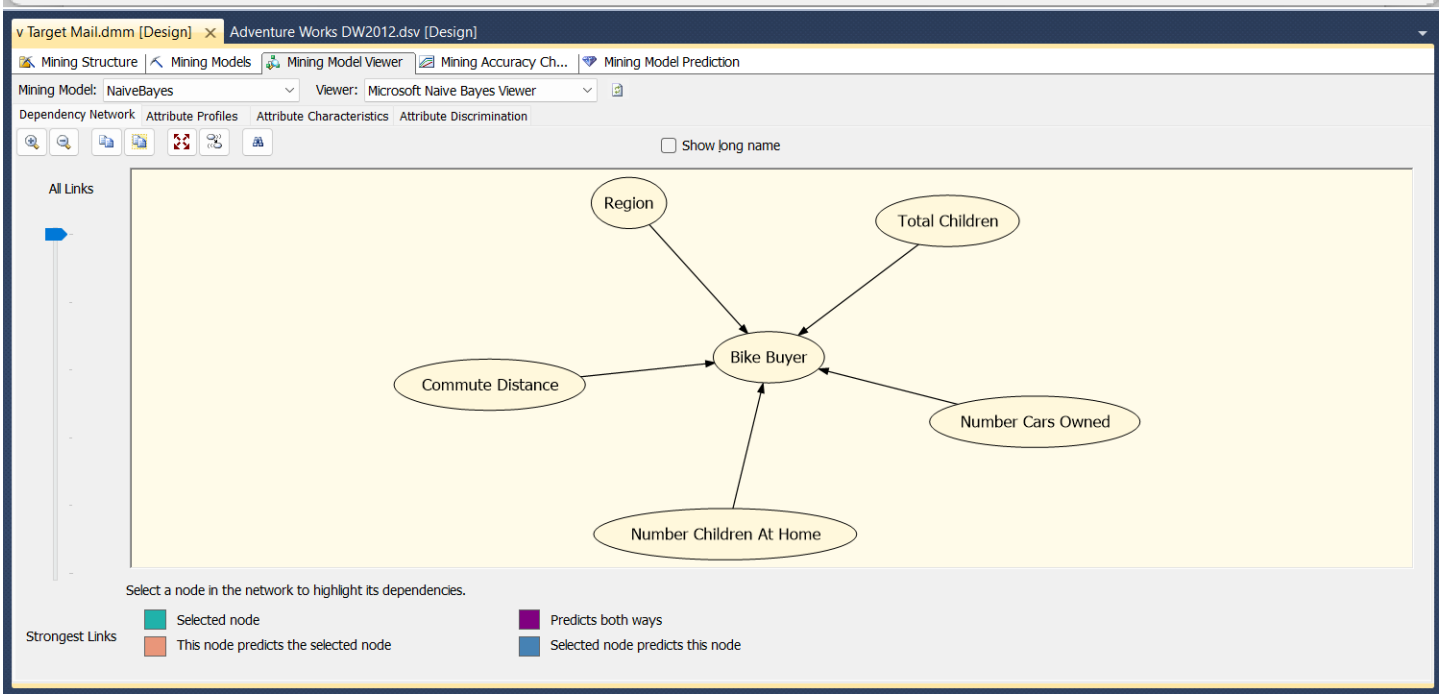

Data Mining Wizard
Specify Columns' Content and Data Type
Specify mining structure columns' content and data type.
Mining model structure:
Columns
Content Type
Data Type
Age
Discretized
Long
Bike Buyer
Discretized
Long
Customer Key
Key
Long
Gender
Discrete
Text
Number Cars Owned
Discretized
Long
Region
Discrete
Text
Total Children
Discretized
Long
Yearly Income
Discretized
Double
Detect continuous or discrete for numeric columns:
Detect
< Back
Next >
Finish >>|
Cancel

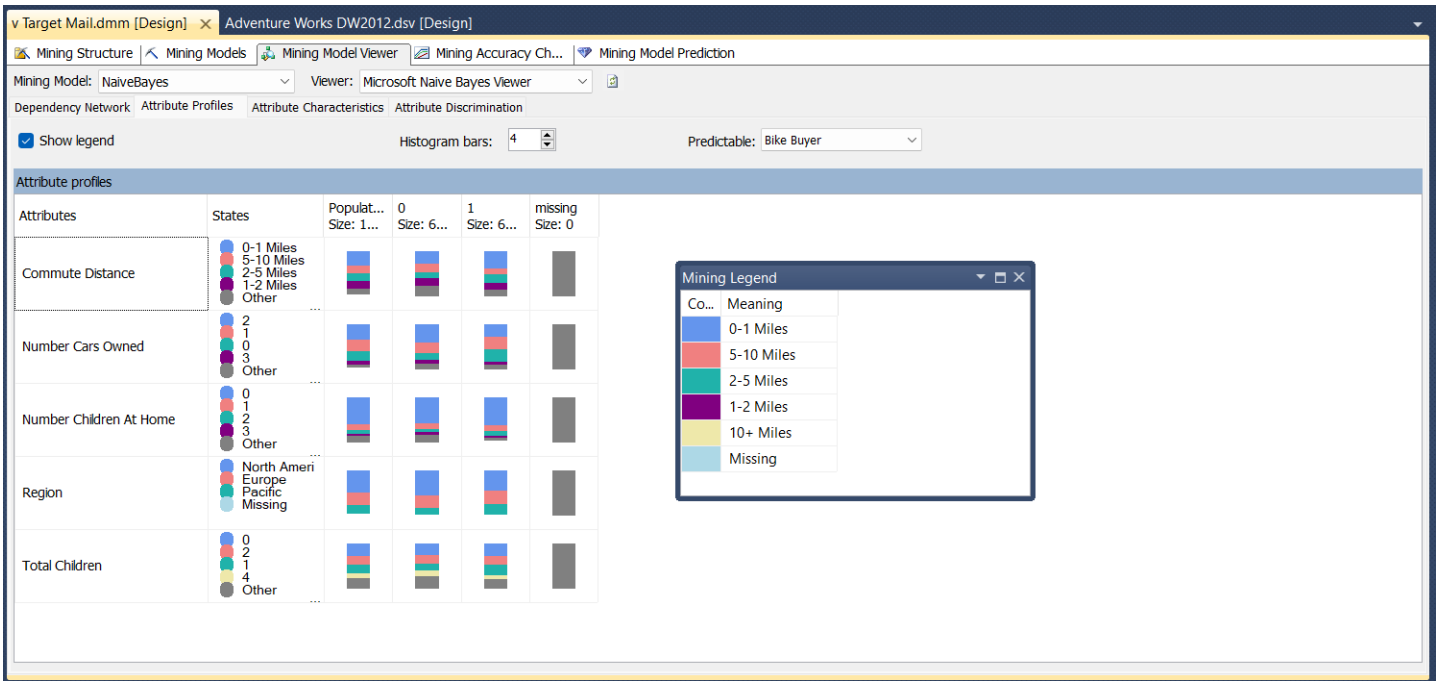

Data Mining Wizard
Create Testing Set
Specify the number of cases to be reserved for model testing.
Percentage of data for testing:
30
%
Maximum number of cases
in testing data set:
Description:
Input data will be randomly split into two sets, a training set and a testing set, based on the percentage of data for testing and maximum number of cases in testing data set you provide. The training set is used to create the mining model. The testing set is used to check model accuracy.
[Percentage of data for testing] specifies percentages of cases reserved for testing set.
[Maximum number of cases in testing data set] limits total number of cases in the testing set.
If both values are specified, both limits are enforced.
< Back
Next >
Finish >>|
Cancel


Data Mining Wizard
Completing the Wizard
Completing the Data Mining Wizard by providing a name for the mining structure.
Mining structure name:
v Target Mail
Mining model name:
v Target Mail
Allow drill through
Preview:
v Target Mail
Columns
Age
Bike Buyer
Customer Key
Gender
Number Cars Owned
Region
Total Children
Yearly Income
< Back
Next >
Finish
Cancel


Process Mining Model - v Target Mail
Object list:
Object Name
Type
Process Options
Settings
v Target Mail
Mining Model
Process Full
Remove
Impact Analysis...
Batch Settings Summary
Processing order:
Parallel
Transaction mode:
(Default)
Dimension errors:
(Default)
Dimension key error log path :
(Default)
Process affected objects:
Do not process
Run...
Close


Process Progress
Command
Processing Mining Structure 'v Target Mail' completed.
Start time: 2/7/2024 11:34:28 AM; End time: 2/7/2024 11:34:32 AM; Duration: 0:00:03
Processing Mining Model 'v Target Mail' completed.
Processing Dimension 'v Target Mail ~MC-Customer Key' completed.
Status:
Process succeeded.
Stop
Reprocess
View Details...
Copy
Close
Help


v Target Mail.dmm [Design]
Adventure Works DW2012.dsv [Design]
Mining Structure
Mining Models
Mining Model Viewer
Mining Accuracy Ch...
Mining Model Prediction
Mining Model: NaiveBayes
Viewer: Microsoft Naive Bayes Viewer
Dependency Network
Attribute Profiles
Attribute Characteristics
Attribute Discrimination
Show long name
All Links
Region
Total Children
Bike Buyer
Commute Distance
Number Cars Owned
Number Children At Home
Select a node in the network to highlight its dependencies.
Strongest Links
Selected node
This node predicts the selected node
Predicts both ways
Selected node predicts this node


v Target Mail.dmm [Design]
Adventure Works DW2012.dsv [Design]
Mining Structure
Mining Models
Mining Model Viewer
Mining Accuracy Ch...
Mining Model Prediction
Mining Model: NaiveBayes
Viewer: Microsoft Naive Bayes Viewer
Dependency Network
Attribute Profiles
Attribute Characteristics
Attribute Discrimination
Show legend
Histogram bars: 4
Predictable: Bike Buyer
Attribute profiles
Attributes
States
Populat... Size: 1...
0 Size: 6...
1 Size: 6...
missing Size: 0
Commute Distance
0-1 Miles
5-10 Miles
2-5 Miles
1-2 Miles
Other
Number Cars Owned
2
1
0
3
Other
Number Children At Home
0
1
2
3
Other
Region
North Ameri
Europe
Pacific
Missing
Total Children
0
2
1
4
Other
Mining Legend
Co...
Meaning
0-1 Miles
5-10 Miles
2-5 Miles
1-2 Miles
10+ Miles
Missing