/\*Denormalized Data\*/

select \*

into crime\_data\_full

from [19su5510\_tolenti4].[dbo].[grouped\_data\_full];

select \*

into crime\_data\_full\_testing

from crime\_data\_full

tablesample(30 percent);

select \*

into crime\_data\_full\_training

from crime\_data\_full c

where c.ParcelNumber not in

(select test.ParcelNumber from crime\_data\_full\_testing test);

select count(\*) [Number of Rows]

from crime\_data\_full;

select count(\*) [Number of Rows]

from crime\_data\_full\_testing;

select count(\*) [Number of Rows]

from crime\_data\_full\_training;

/\*Convert TaxableValueCurrentYear into a Numeric Data Type\*/

select \*, convert(decimal(16,4), TaxableValueCurrentYear) AS TaxableValueCurrentYearNum

into crime\_data\_full\_norm

from [19su5510\_tolenti4].[dbo].[grouped\_data\_full];

/\*Normalize Data\*/

select max(TaxableValueCurrentYearNum) maxTax, min(TaxableValueCurrentYearNum) minTax

from crime\_data\_full\_norm;

select AVG(TaxableValueCurrentYearNum) avgTax, STDEV(TaxableValueCurrentYearNum) stdevTax

from crime\_data\_full\_norm;

select ParcelNumber, TaxableValueCurrentYearNum,

(TaxableValueCurrentYearNum - 0)/(1588500 - 0) as minmaxTax,

(TaxableValueCurrentYearNum - 330858.583120)/114084.87354615 as stdevTax

from crime\_data\_full\_norm;

/\*Create View of Normalized Data\*/

create view CrimeNorm as

select \*, (TaxableValueCurrentYearNum - 0)/(1588500 - 0) as minmaxTax,

(TaxableValueCurrentYearNum - 330858.583120)/114084.87354615 as stdevTax

from crime\_data\_full\_norm;

go

select \* from CrimeNorm

/\*Create Testing & Training Tables from Normalized Data\*/

select \*

into crimeNormalized

from [19su5510\_tolenti4].[dbo].[CrimeNorm];

select \*

into crimeNormTesting

from crimeNormalized

tablesample(30 percent);

select \*

into crimeNormTraining

from crimeNormalized c

where c.ParcelNumber not in

(select test.ParcelNumber from crimeNormTesting test);

select count(\*) [Number of Rows]

from crimeNormalized;

select count(\*) [Number of Rows]

from crimeNormTesting;

select count(\*) [Number of Rows]

from crimeNormTraining;

/\*Create a View and Calculate MSE from DTree\*/

create view mseCrimeNormDTree as

select square([ActualTaxValue] - [PredTaxValue]) [SqError]

from [dbo].[CrimeNormDTreeResults];

select count(\*)

from mseCrimeNormDTree;

select sum([SqError])/count(\*) [MSE\_DTree]

from mseCrimeNormDTree;

/\*Create a View and Calculate MSE from NN\*/

create view mseCrimeNormNN as

select square([ActualTaxValue] - [PredTaxValue]) [SqError]

from [dbo].[CrimeNormNNResults];

select count(\*)

from mseCrimeNormNN;

select sum([SqError])/count(\*) [MSE\_NN]

from mseCrimeNormNN;