**Appendix A**

import csv

final =csv.writer(open('training\_edit2.csv','wb+'))

training= csv.reader(open("training.csv","rb"), delimiter=',')

###Set Column Names

for row in training:

final.writerow(row+["DifAquiredAvg\_CurAvgAuction"]+["DifAquiredAboveAvg\_CurAboveAvgRetail"]+["DifAquiredAvg\_CurAvgRetail"]+["DifAquiredAboveAvg\_CurAboveAvgAuction"]+["AdjVehOd"])

break

for row in training:

if row[22]=="0" or row[22]=="NULL":

continue

if row[1]=="1":

row[1]="TRUE" ##BAD

if row[1]=="0":

row[1]="FALSE" ##GOOD

### Difference in Price paid 31 and MMRCurrentAuctionAveragePrice 22

avgCurAucPrice = (int(row[22])+int(row[23]))/2

avgCurRetailPrice = (int(row[24])+int(row[25]))/2

### Difference in Aquired v. Current Average Auction Price

if(int(row[5])>0):

vehAge=int(row[5])

dif1 = (int(row[18])-int(row[22]))/vehAge

else:

dif1 = (int(row[18])-int(row[22]))

### Difference in Aquired v. Current Above Average Retail Price

if(int(row[5])>0):

vehAge=int(row[5])

dif2 = (int(row[21])-int(row[25]))/vehAge

else:

dif2 = (int(row[21])-int(row[25]))

### Difference in Aquired v. Current Average Retail Price

if(int(row[5])>0):

vehAge=int(row[5])

dif3 = (int(row[20])-int(row[24]))/vehAge

else:

dif3 = (int(row[20])-int(row[24]))

### Difference in Aquired v. Current Above Average Auction Price

if(int(row[5])>0):

vehAge=int(row[5])

dif4 = (int(row[19])-int(row[23]))/vehAge

else:

dif4 = (int(row[19])-int(row[23]))

### Veh Miles divided by age

if(int(row[5])>0 and int(row[14])>0):

dif5 = int(int(row[14])/int(row[5]))

else:

dif5 = int(row[14])

final.writerow(row+[dif1]+[dif2]+[dif3]+[dif4]+[dif5])