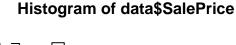
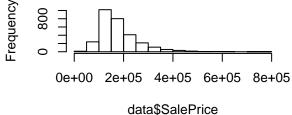
Ames Housing EDA and Cleaning

Joel Bracken

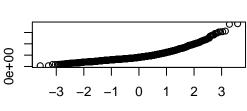
Sample Quantiles

Sample Quantiles



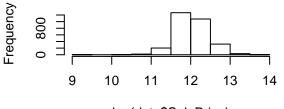


Normal Q-Q Plot

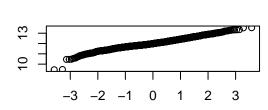


Theoretical Quantiles

Histogram of log(data\$SalePrice)

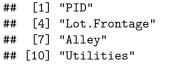


Normal Q-Q Plot



Theoretical Quantiles

log(data\$SalePrice)



[13] "Neighborhood" ## [16] "Bldg.Type"

[19] "Overall.Cond" [22] "Roof.Style" [25] "Exterior.2nd"

[28] "Exter.Qual" ## [31] "Bsmt.Qual" [34] "BsmtFin.Type.1"

"BsmtFin.SF.2" ## [37] [40] "Heating" ##

[43] "Electrical" "Low.Qual.Fin.SF" [46]## [49] "Bsmt.Half.Bath"

"Bedroom.AbvGr"

[55] "TotRms.AbvGrd" [58] "Fireplace.Qu" [61] ## "Garage.Finish"

[52]

##

[64] "Garage.Qual" [67] "Wood.Deck.SF" [70] "X3Ssn.Porch"

"MS.SubClass" "Lot.Area" "Lot.Shape"

"Lot.Config" "Condition.1"

"House.Style" "Year.Built" "Roof.Matl"

"Mas.Vnr.Type" "Exter.Cond"

"Bsmt.Cond" "BsmtFin.SF.1" "Bsmt.Unf.SF"

"Heating.QC" "X1st.Flr.SF"

"Gr.Liv.Area" "Full.Bath" "Kitchen.AbvGr"

"Functional" "Garage.Type" "Garage.Cars" "Garage.Cond" "Open.Porch.SF"

"Screen.Porch"

"MS.Zoning" "Street"

"Land.Contour" "Land.Slope"

"Condition.2"

"Overall.Qual" "Year.Remod.Add"

"Exterior.1st" "Mas.Vnr.Area"

"Foundation" "Bsmt.Exposure"

"BsmtFin.Type.2" "Total.Bsmt.SF" "Central.Air"

"X2nd.Flr.SF" "Bsmt.Full.Bath"

"Half.Bath" "Kitchen.Qual" "Fireplaces"

"Garage.Yr.Blt" "Garage.Area"

"Paved.Drive" "Enclosed.Porch" "Pool.Area"

```
## [73] "Pool.QC"
                           "Fence"
                                               "Misc.Feature"
## [76] "Misc.Val"
                           "Mo.Sold"
                                               "Yr.Sold"
                           "Sale.Condition" "SalePrice"
## [79] "Sale.Type"
     Lot.Frontage Lot.Area Lot.Shape Lot.Config Bldg.Type House.Style
                                   IR1
## 1
              141
                      31770
                                           Corner
                                                       1Fam
                                                                   1Story
## 2
               80
                      11622
                                           Inside
                                                        1Fam
                                   Reg
                                                                   1Story
## 3
               81
                      14267
                                   IR1
                                           Corner
                                                        1Fam
                                                                   1Story
## 4
               93
                      11160
                                   Reg
                                           Corner
                                                        1Fam
                                                                   1Story
## 5
               74
                      13830
                                   IR1
                                           Inside
                                                        1Fam
                                                                   2Story
               78
                       9978
                                   IR1
                                           Inside
                                                        1Fam
     Overall.Qual Overall.Cond Year.Built Year.Remod.Add Exter.Qual
                                       1960
## 1
                 6
                              5
                                                       1960
## 2
                 5
                              6
                                       1961
                                                       1961
                                                                     ТΔ
## 3
                 6
                              6
                                       1958
                                                       1958
                                                                     TA
## 4
                 7
                              5
                                       1968
                                                       1968
                                                                     Gd
## 5
                 5
                              5
                                       1997
                                                       1998
                                                                     TA
                              6
## 6
                 6
                                       1998
                                                       1998
                                                                     TA
     Exter.Cond Foundation Bsmt.Qual Bsmt.Exposure BsmtFin.Type.1 Bsmt.Unf.SF
             TA
                                    TA
                                                   Gd
## 1
                     CBlock
                                                                  BLQ
                                                                               441
## 2
             TA
                     CBlock
                                    TA
                                                   No
                                                                  Rec
                                                                               270
## 3
             TA
                                    TA
                                                                               406
                     CBlock
                                                   No
                                                                  ALQ
## 4
             TΑ
                     CBlock
                                    TA
                                                   No
                                                                  ALQ
                                                                              1045
## 5
             TA
                      PConc
                                    Gd
                                                   No
                                                                  GLQ
                                                                               137
             TA
                      PConc
                                    TA
                                                   No
                                                                  GLQ
                                                                              324
     Total.Bsmt.SF Heating.QC Central.Air Gr.Liv.Area Bedroom.AbvGr
## 1
              1080
                            Fa
                                          Y
                                                    1656
## 2
                                          Y
                                                                      2
               882
                            TA
                                                     896
                                          Y
## 3
              1329
                            TA
                                                    1329
                                                                      3
## 4
              2110
                            Ex
                                          Y
                                                    2110
                                                                      3
## 5
               928
                            Gd
                                          Y
                                                    1629
                                                                      3
               926
                            Ex
                                          Y
                                                    1604
     Kitchen.Qual TotRms.AbvGrd Functional Garage.Type Garage.Yr.Blt
## 1
                                7
               TA
                                         Тур
                                                   Attchd
## 2
               TA
                                5
                                         Typ
                                                   Attchd
                                                                    1961
## 3
               Gd
                                6
                                                                    1958
                                         Тур
                                                   Attchd
## 4
               Ex
                                8
                                                                    1968
                                                   Attchd
                                         Тур
## 5
                TA
                                6
                                         Тур
                                                   Attchd
                                                                    1997
                               7
                                                                    1998
## 6
               Gd
                                         Тур
                                                   Attchd
     Garage.Finish Garage.Cars Garage.Area Paved.Drive Misc.Val Yr.Sold
## 1
                              2
                                                        Ρ
                                                                  0
               Fin
                                         528
                                                                       2010
                                                        Y
## 2
               Unf
                              1
                                         730
                                                                  0
                                                                       2010
## 3
               Unf
                                                        Y
                                                              12500
                              1
                                         312
                                                                       2010
## 4
               Fin
                              2
                                         522
                                                        Y
                                                                  0
                                                                       2010
## 5
               Fin
                              2
                                         482
                                                        Y
                                                                       2010
                                                        Y
               Fin
                              2
                                         470
                                                                  0
                                                                       2010
     Sale.Type Sale.Condition SalePrice Mas.Vnr Two.Floors Fireplace Deck
                                   215000
## 1
           WD
                        Normal
                                               Yes
                                                           No
                                                                     Yes Yes
## 2
           WD
                        Normal
                                   105000
                                               No
                                                           No
                                                                      No
                                                                          Yes
## 3
           WD
                                   172000
                                               Yes
                                                           No
                                                                          Yes
                        Normal
                                                                      No
## 4
           WD
                        Normal
                                   244000
                                               No
                                                           No
                                                                     Yes
## 5
           WD
                                   189900
                                                                     Yes
                        Normal
                                               No
                                                          Yes
                                                                          Yes
## 6
           WD
                        Normal
                                   195500
                                                          Yes
                                                                     Yes Yes
                                              Yes
##
    Porch Bath Season
```

1 Yes 2.0 Spring
2 Yes 1.0 Summer
3 Yes 1.5 Summer
4 No 3.5 Spring
5 Yes 2.5 Spring
6 Yes 2.5 Summer