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DATA 558

Hw4

1. Giving g(x) = e^x, we can give plot a graph of each.
   1. ĝ(x) = 0

Histogram

Description automatically generated

* 1. ĝ(x) =

= 2.256

Graphical user interface

Description automatically generated with low confidence

* 1. ĝ(x) = ax+b

After running lm(y ~ x), we get the coefficients to be:

(Intercept) x

2.194379 3.105231

Chart, line chart

Description automatically generated

* 1. ĝ(x) =

After running a lm with y ~ x + x^2, the equation is:   
1.58870890\*x^2 + 2.5476450\*x + 0.08390203

Graphical user interface, histogram

Description automatically generated

Histogram

Description automatically generated with medium confidence

Using this code:

Text

Description automatically generated

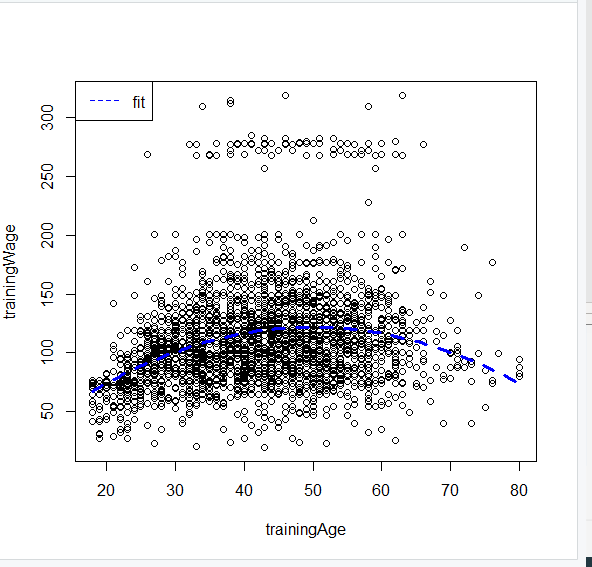
1. .

A piece of paper with writing

Description automatically generated with medium confidence

1. .
   1. After splitting data in 2800 training and 200 testing, polynomial function ended up being:

Y = -0.05321429\*x^2 + 5.31585967\*x -10.87610589



Producing a graph like this with the blue dashed line being the fitted values.