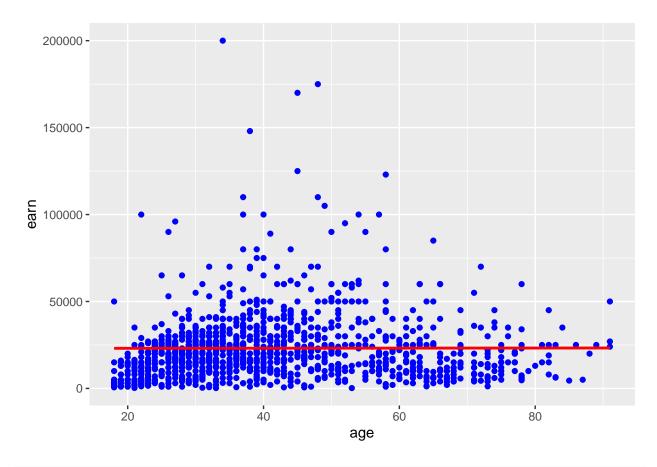
assignment_06_RapuruSupraja

Supraja Rapuru

8/1/2021

```
## View the summary of your model using `summary()`
summary(age_lm)
```

```
##
## Call:
## lm(formula = heights_df$earn ~ heights_df$age)
## Residuals:
##
     Min
             1Q Median
                           3Q
                                 Max
## -25098 -12622 -3667
                         6883 177579
##
## Coefficients:
##
                 Estimate Std. Error t value Pr(>|t|)
## (Intercept)
                 19041.53
                             1571.26 12.119 < 2e-16 ***
                    99.41
                               35.46
                                      2.804 0.00514 **
## heights_df$age
## Signif. codes: 0 '*** 0.001 '** 0.01 '* 0.05 '.' 0.1 ' 1
## Residual standard error: 19420 on 1190 degrees of freedom
## Multiple R-squared: 0.006561, Adjusted R-squared: 0.005727
## F-statistic: 7.86 on 1 and 1190 DF, p-value: 0.005137
## 'geom_smooth()' using formula 'y ~ x'
```



mean_earn

[1] 23154.77

sse

[1] 448628772037

ssm

[1] 2963111900

residuals

```
[1] 26485.214165
                        35192.939138
                                        8075.706507 21912.548684
                                                                   28081.648793
##
##
      [6] -12626.076179
                         5087.591080
                                       8385.808394 -19129.047323
                                                                    5373.923821
##
     [11] -18972.901261
                         7578.677650
                                       -9725.481951 -12111.220463
                                                                    -520.728121
##
     [16] -7807.060862
                       18075.706507
                                       20584.619937 -17508.843548
                                                                   30479.271879
##
     [21] -19111.220463
                        -7129.047323 -15728.453094
                                                   16882.837251
                                                                   10485.214165
##
     [26] -12520.728121
                         1994.127596
                                       27181.054565
                                                    18678.083421
                                                                   -6526.670408
##
     [31]
            2678.083421
                        52081.648793
                                        4876.894964 -9626.076179 -19295.176288
     [36]
           7876.894964
                        -3707.655091
##
                                        5373.923821 -22502.901261
                                                                    2976.300735
##
     [41]
            882.837251 10075.706507 -12023.699265 -10129.047323
                                                                  -3522.510807
     [46] -1924.293493 -17330.830009 -11608.249319 -502.901261 -2117.162749
##
```

```
##
           10087.591080 -19502.901261 -4824.887722 12777.489193 -16830.830009
##
                                         3075.706507
     [56] -10508.843548 -14707.655091
                                                      -5725.481951 -5824.887722
##
     [61]
           -6815.974292 -21801.118575 -20370.626234
                                                       -918.351207 -24110.032005
##
     [66]
            4274.518049 -18629.047323
                                       -5918.351207 -13228.453094 -13801.118575
##
     [71]
          -13713.597377 -15701.712804
                                       -7918.351207 -20518.351207
                                                                      7777.489193
##
            7678.083421 -12818.945435 -16626.076179 -13304.089718
     [76]
                                                                    -5105.278176
                        -1327.858865 -19829.641551 -21522.510807
##
     [81]
           -2620.133893
                                                                    -1725.481951
##
     [86] -11228.453094
                          3701.852568
                                        15391.750681
                                                      -2888.639773 -16894.582060
##
     Γ917
           34695.910282
                         -7602.307032
                                        -6281.916579
                                                      -7023.699265 -11327.858865
##
     [96]
            9684.025708
                         -4023.699265
                                        -7719.539664
                                                       -228.453094
                                                                    -2315.974292
    [101]
           14280.460336
                         14584.619937
                                        -6315.974292
                                                       9976.300735
                                                                      2692.939138
##
    [106]
           -6915.380063
                          2479.271879
                                         3684.025708 -16824.887722
                                                                     47181.054565
##
    [111] -18017.756978 -16427.264637
                                        -1626.076179 -17129.047323
                                                                     37479.271879
##
    [116] -17123.105036
                          7181.054565
                                        47479.271879 26882.837251
                                                                     21081.648793
##
    [121]
            6684.025708 -13017.756978
                                                      19795.316053
                                                                    -7123.105036
                                         -216.568521
##
    [126] -22099.335889
                         -5123.105036
                                         7777.489193
                                                       5476.300735 -20212.524346
##
    [131]
           -6608.249319
                         19584.619937
                                         8584.619937 -14608.249319
                                                                     36485.214165
##
    [136]
           -3011.814691 -18828.453094 -20824.887722
                                                       5274.518049 -15224.887722
##
    [141]
           -7315.974292
                         68373.923821 -15216.568521
                                                      -2222.510807
                                                                    -5830.830009
    [146] -13005.872404
                           385.808394
                                        -2918.351207
                                                      -4614.191606 -13912.408920
##
    [151]
           17578.677650
                          -403.495490
                                         3572.735363
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                                                                    -6105.278176
                         -8912.408920
                                        -5620.133893
                                                       -608.249319
##
    [156]
           20186.996851
                                                                       280.460336
                         41385.808394 -18304.089718
##
    [161] -13397.553203
                                                      14695.910282
                                                                     -8315.974292
##
    Г1661
           -1526.670408
                         -4011.814691
                                        -3216.568521
                                                       1087.591080
                                                                    26280.460336
##
    [171]
            -502.901261 -13707.655091
                                       -6818.945435
                                                      11684.025708 101485.214165
    [176]
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                                         3882.837251
                                                      47777.489193
                                                                    11286.402623
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                         12081.648793
                                        -7818.945435 -10918.351207 -17801.118575
##
##
    [186] -16011.814691
                         10988.185309
                                        20888.779537
                                                      -6228.453094 -11695.770517
##
    [191]
            -111.220463
                          2777.489193
                                          590.562223
                                                     -1824.887722
                                                                      2572.735363
##
    [196]
           20385.808394
                         46181.054565
                                        38584.619937
                                                       9777.489193
                                                                    -2321.916579
##
    [201]
            9479.271879
                           988.185309 146485.214165
                                                      12678.083421
                                                                     17181.054565
##
    [206]
           10976.300735
                         -3228.453094
                                         6684.025708
                                                       3876.894964 -16129.047323
##
    [211]
           -6298.147432
                         -5023.699265
                                        10175.112278
                                                      -6228.453094
                                                                     25491.156452
##
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                         15888.779537
                                        16882.837251
                                                      10328.677650
                                                                     -5900.524346
##
    [221]
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                                                      34695.910282
                                                                     16584.619937
##
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                         22578.677650 -16918.351207 -19192.799374
           20181.054565
                                                                     -2918.351207
##
    [231]
           -4327.858865 -20222.510807 43175.112278
                                                      26882.837251 -11818.945435
##
    [236]
           12976.300735
                          4678.083421 -21605.278176
                                                      19280.460336
                                                                    -1924.293493
    [241]
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                                                      -4327.858865
                                                                      9497.098739
##
                        -7321.916579
                                       -1427.264637
                                                      -1924.293493 -12716.568521
##
    [246]
            6175.112278
    [251]
           -8228.453094 -14210.626234 -19719.539664
                                                       2075.706507
                                                                     -5520.728121
    [256] -12813.003149
                          8982.243022
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##
##
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                         -4626.076179
                                         8175.112278
                                                      -7222.510807
                                                                       783.431479
##
    [266] -15701.712804
                         25689.967995 25689.967995
                                                      -3912.408920
                                                                      5590.562223
##
    [271]
           -1514.785835
                          5572.735363 -18818.945435
                                                      -4126.076179
                                                                     -5324.887722
    [276]
                         27988.185309
                                                      -3222.510807
##
            5081.648793
                                       -6924.293493
                                                                      5672.141135
##
    [281]
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                                                       1976.300735
                                                                     -4620.133893
##
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                                                      -4087.451316
                                                                      4081.648793
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    [291] -10520.728121 -1713.597377
                                         7379.866107
                                                                    -3216.568521
##
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            9777.489193 -16123.105036 -10918.351207 -12123.105036 -19830.830009
##
    [301] -14099.335889 -6620.133893
                                         2678.083421
                                                       3274.518049
                                                                      9976.300735
##
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                                        56584.619937
                                                      -1526.670408 -21818.945435
##
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            5181.054565
                          4672.141135
                                         5572.735363 -5117.162749 -22906.466633
##
    [316]
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                                         -304.089718 -9924.293493 -12707.655091
```

```
[321]
            3403.635254 -17228.453094
                                        3280.460336
                                                        479.271879 -1321.916579
##
    [326]
                                                       2671.546906
            -204.683947 -8496.958974 -19415.380063
                                                                   11982.243022
                          2379.866107
##
    [331]
            3976.300735
                                         1774.518049
                                                     -9228.453094
                                                                    -6029.641551
    [336] -18327.858865 -19701.712804 -11900.524346
                                                     -7123.105036 151186.996851
##
##
    [341] -20526.670408 -15304.089718
                                       17807.200626 -12093.393602
                                                                    -3117.162749
           12976.300735 18175.112278
                                        8801.258340 25590.562223
                                                                   75292.344909
##
    [346]
    [351]
           13175.112278
                          1479.271879
                                        11684.025708 11602.446797
                                                                     5789.373766
##
    [356] -17918.351207 125181.054565
                                        7777.489193 -15623.105036 -19719.539664
##
    [361]
           -2900.524346 16882.837251
                                        7081.648793 -8719.539664
                                                                   -7421.322350
##
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            3379.866107 -13526.670408
                                         2274.518049 -20577.712804 -11526.670408
    [371] -10222.510807
                         27578.677650
                                        1373.923821 17578.677650 -15626.076179
                         87280.460336
                                        18777.489193 -3795.176288
                                                                    -327.858865
##
    [376] -17023.699265
##
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                          2379.866107
                                        6385.808394 -10111.220463 -16520.728121
##
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          -9614.191606 21274.518049
                                         2678.083421 14397.692968 41982.243022
##
    [391]
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##
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                                                      13870.952677 -18496.958974
##
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           -3222.510807 -1918.351207
                                        19385.808394
##
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                                        -6614.191606
                                                         87.591080 -21099.335889
    [411] -10327.858865 -11725.481951
                                       17379.866107
##
                                                     16286.402623
                                                                     2075.706507
##
    [416]
            2373.923821 -2321.916579
                                        35988.185309 -12713.597377 -18017.756978
##
    [421]
            4976.300735 65882.837251
                                       18175.112278 -6626.076179 -20029.641551
    [426]
           -3005.872404 -11813.003149
                                         175.112278 15391.750681 16584.619937
##
    [431]
           10689.967995 -14824.887722
                                       -8719.539664 -9608.249319 -16421.322350
##
                                       -3117.162749 -19298.147432 14385.808394
##
    [436] -12117.162749 -12123.105036
##
    [441]
            4192.939138 -3415.380063 -16707.655091 11888.779537 -21915.380063
    [446]
           20075.706507
                          3771.546906
                                       -8029.641551
                                                       5888.779537 -14327.858865
    [451]
            7186.996851
                        -8216.568521
                                       26087.591080 -16029.641551 -20230.830009
##
##
    [456] -10111.220463 17479.271879
                                        1379.866107
                                                        572.735363
                                                                   -2620.133893
##
    [461]
           -2706.945435 -13701.712804
                                       17982.243022 -11011.814691 37876.894964
##
    [466]
            2473.329592
                        15379.866107 -18725.481951 -9023.699265 -16129.047323
                                        3491.156452 -1117.162749
##
    [471]
           -2719.539664
                           175.112278
                                                                     6584.619937
##
    [476]
            7777.489193
                          7876.894964
                                         6099.475654
                                                       2684.025708
                                                                     -421.322350
##
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            2678.083421 -10427.264637 -11310.032005 -13216.568521 -11514.785835
                         34280.460336
                                       13280.460336
                                                       7075.706507 -12930.235780
##
    [486] -18403.495490
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##
    [491] -17830.830009
                         -3117.162749
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##
    [496] -21795.176288 -15315.974292
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                                                                   -8924.293493
##
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##
    [506]
           -2520.728121 \quad 32479.271879 \quad -13017.756978 \quad -7930.235780 \quad -2123.105036
##
    [511]
            8373.923821 -10421.322350
                                         3678.083421 -9225.481951 -13924.293493
##
          -7222.510807
                         43473.329592
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    [516]
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                                       17876.894964
                                                       7771.546906 -7123.105036
    [521] -11017.756978
                         12280.460336
    [526]
          -2620.133893 -22204.683947 -19930.235780 -13327.858865 -15830.830009
##
##
    [531]
            3274.518049
                         -4707.655091
                                        7578.677650 -10520.728121 -12222.510807
##
    [536]
          -4930.235780
                         23075.706507
                                       15590.562223 -2093.393602
                                                                   -5210.626234
##
    [541]
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                                        7777.489193 -5713.597377
                                                                     1286.402623
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                                       -7421.322350
                                                       2678.083421
                                                                   13175.112278
##
                         46783.431479
##
    [551]
           -3427.264637
                          5976.300735
                                       -6129.047323
                                                        175.112278
                                                                    12976.300735
##
    [556]
           -5614.191606
                         12280.460336
                                       -4729.047323
                                                       -719.539664
                                                                     5192.939138
##
    [561]
           -4725.481951
                          2379.866107 -14111.220463
                                                      17280.460336 -12804.089718
##
    [566]
           11485.214165
                         81087.591080
                                       76982.243022
                                                      -3111.220463 -14608.249319
##
                                       33204.823712
                                                     -5514.785835 -10105.278176
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                          4473.329592
##
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                         36783.431479 -13900.524346
                                                       5181.054565
                                                                   18684.025708
##
    [581] -20321.916579
                         -2321.916579
                                        4982.243022 -15204.683947
                                                                     8876.894964
##
    [586]
          -5719.539664 -6918.351207 12181.054565 -18626.076179 -6918.351207
```

```
[591]
           11783.431479
                          4678.083421
                                        3075.706507 16882.837251
                                                                    21684.025708
##
    [596]
           -7327.858865
                          2280.460336
                                       16783.431479
                                                      11479.271879
                                                                    17578.677650
    [601]
##
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                                        6684.025708
                                                        -17.756978 -20023.699265
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                                       36684.025708 -11117.162749
##
                                                                     -105.278176
##
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                                                    -3026.076179
                                                                    -1029.641551
           77280.460336 26982.243022
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##
    [616]
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                                       -8520.728121 -18402.307032
##
    [621]
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##
             578.677650 -13117.162749
                                         572.735363 -7930.235780
                                                                   10876.894964
##
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##
    [636]
          -2514.785835
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                                                      6473.329592
##
                                        3882.837251
                                                                    -6725.481951
##
    [651]
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                                                      7976.300735
                                                                    -2123, 105036
    [656]
##
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                          3373.923821 -18228.453094
                                                     -7912.408920 -12918.351207
##
    [661]
           -6824.887722
                          4385.808394
                                        8979.271879 70789.373766
                                                                   14982.243022
##
    [666]
            6882.837251
                         12683.431479 -9228.453094 -11526.670408
                                                                    21584.619937
##
    [671]
           15391.750681
                          -225.481951 -11204.683947
                                                     13590.562223 -19830.830009
##
    [676] -12298.147432 -7123.105036
                                         783.431479 -16827.858865
                                                                    -7304.089718
          -7029.641551 -11824.887722 -12722.510807 -14602.307032
                                                                   -8701.712804
##
    Γ681]
##
    [686] -15824.887722 -22307.060862 16882.837251
                                                      2081.648793
                                                                     2994.127596
##
    [691]
            9485.214165 -21403.495490 -17923.699265 -2192.799374
                                                                    10175.112278
    [696] -11807.060862 -13725.481951 -5818.945435 -11695.770517
                                                                    -4222.510807
##
                                                                    -6017.756978
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##
##
    [706]
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                                        -321.916579 -6129.047323
                                                                    -1087.451316
                                                                    -5614.191606
##
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                                      -5023.699265 -21814.191606
    [716]
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                                                                     9900.664111
##
    [721]
            8473.329592 -1795.176288 -20626.076179 34397.692968
                                                                     8403.635254
##
    [726] -13321.916579
                          7608.389084 -13807.060862 -12210.626234
                                                                     6684.025708
##
          -5707.655091 -16105.278176
                                        8075.706507 -13222.510807
                                                                    -7023.699265
    [731]
##
    [736] -14123.105036 -16496.958974 10280.460336 -9824.887722
                                                                    -4719.539664
##
    [741]
            4894.721824
                        -9722.510807 -12620.133893 -17599.335889
                                                                    -2614.191606
##
    [746]
           -5695.770517
                          -526.670408 -19210.626234
                                                      -620.133893
                                                                     8373.923821
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                          2075.706507
                                        -5222.510807
                                                       -813.003149
                                                                     2678.083421
## [1156]
           25988.185309
                         -2023.699265
                                        7678.083421 -15918.351207 -19795.176288
## [1161]
            7777.489193 -18427.264637
                                        -3315.974292
                                                     15093.533367 -16695.770517
## [1166]
           -6719.539664 -13111.220463
                                       -7315.974292
                                                     -3725.481951 -9626.076179
## [1171] -17129.047323 36485.214165
                                       19982.243022
                                                       8081.648793 27081.648793
```

```
## [1176] 5075.706507 5391.750681 -9129.047323 -2023.699265 -11596.364746
## [1181] 2280.460336 -23701.712804 -18029.641551 86186.996851 28900.664111
## [1186] 33689.967995 -12620.133893 -2924.293493 -12192.799374 -14321.916579
## [1191] 35988.185309 -15725.481951
sse
## [1] 448628772037
r_squared
## [1] 0.006561482
## [1] 1192
## [1] 2
dfm
## [1] 1
dfe
## [1] 1190
## [1] 1191
## [1] 2963111900
## [1] 376998968
## [1] 379170348
f_score
```

[1] 7.859735

adjusted_r_squared

[1] 0.005726659