Weatherdata.R

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ozoneData <-read.csv("C:\\Users\\nbhosale\\Downloads\\Big\_Data-master\\Big\_Data-master\\Ozone\_data.csv")  
ozoneData

## Ozone Solar.R Wind Temp Month Day  
## 1 41 190 7.4 67 5 1  
## 2 36 118 8.0 72 5 2  
## 3 12 149 12.6 74 5 3  
## 4 18 313 11.5 62 5 4  
## 5 23 299 8.6 65 5 7  
## 6 19 99 13.8 59 5 8  
## 7 8 19 20.1 61 5 9  
## 8 16 256 9.7 69 5 12  
## 9 11 290 9.2 66 5 13  
## 10 14 274 10.9 68 5 14  
## 11 18 65 13.2 58 5 15  
## 12 14 334 11.5 64 5 16  
## 13 34 307 12.0 66 5 17  
## 14 6 78 18.4 57 5 18  
## 15 30 322 11.5 68 5 19  
## 16 11 44 9.7 62 5 20  
## 17 1 8 9.7 59 5 21  
## 18 11 320 16.6 73 5 22  
## 19 4 25 9.7 61 5 23  
## 20 32 92 12.0 61 5 24  
## 21 23 13 12.0 67 5 28  
## 22 45 252 14.9 81 5 29  
## 23 115 223 5.7 79 5 30  
## 24 37 279 7.4 76 5 31  
## 25 29 127 9.7 82 6 7  
## 26 71 291 13.8 90 6 9  
## 27 39 323 11.5 87 6 10  
## 28 23 148 8.0 82 6 13  
## 29 21 191 14.9 77 6 16  
## 30 37 284 20.7 72 6 17  
## 31 20 37 9.2 65 6 18  
## 32 12 120 11.5 73 6 19  
## 33 13 137 10.3 76 6 20  
## 34 135 269 4.1 84 7 1  
## 35 49 248 9.2 85 7 2  
## 36 32 236 9.2 81 7 3  
## 37 64 175 4.6 83 7 5  
## 38 40 314 10.9 83 7 6  
## 39 77 276 5.1 88 7 7  
## 40 97 267 6.3 92 7 8  
## 41 97 272 5.7 92 7 9  
## 42 85 175 7.4 89 7 10  
## 43 10 264 14.3 73 7 12  
## 44 27 175 14.9 81 7 13  
## 45 7 48 14.3 80 7 15  
## 46 48 260 6.9 81 7 16  
## 47 35 274 10.3 82 7 17  
## 48 61 285 6.3 84 7 18  
## 49 79 187 5.1 87 7 19  
## 50 63 220 11.5 85 7 20  
## 51 16 7 6.9 74 7 21  
## 52 80 294 8.6 86 7 24  
## 53 108 223 8.0 85 7 25  
## 54 20 81 8.6 82 7 26  
## 55 52 82 12.0 86 7 27  
## 56 82 213 7.4 88 7 28  
## 57 50 275 7.4 86 7 29  
## 58 64 253 7.4 83 7 30  
## 59 59 254 9.2 81 7 31  
## 60 39 83 6.9 81 8 1  
## 61 9 24 13.8 81 8 2  
## 62 16 77 7.4 82 8 3  
## 63 122 255 4.0 89 8 7  
## 64 89 229 10.3 90 8 8  
## 65 110 207 8.0 90 8 9  
## 66 44 192 11.5 86 8 12  
## 67 28 273 11.5 82 8 13  
## 68 65 157 9.7 80 8 14  
## 69 22 71 10.3 77 8 16  
## 70 59 51 6.3 79 8 17  
## 71 23 115 7.4 76 8 18  
## 72 31 244 10.9 78 8 19  
## 73 44 190 10.3 78 8 20  
## 74 21 259 15.5 77 8 21  
## 75 9 36 14.3 72 8 22  
## 76 45 212 9.7 79 8 24  
## 77 168 238 3.4 81 8 25  
## 78 73 215 8.0 86 8 26  
## 79 76 203 9.7 97 8 28  
## 80 118 225 2.3 94 8 29  
## 81 84 237 6.3 96 8 30  
## 82 85 188 6.3 94 8 31  
## 83 96 167 6.9 91 9 1  
## 84 78 197 5.1 92 9 2  
## 85 73 183 2.8 93 9 3  
## 86 91 189 4.6 93 9 4  
## 87 47 95 7.4 87 9 5  
## 88 32 92 15.5 84 9 6  
## 89 20 252 10.9 80 9 7  
## 90 23 220 10.3 78 9 8  
## 91 21 230 10.9 75 9 9  
## 92 24 259 9.7 73 9 10  
## 93 44 236 14.9 81 9 11  
## 94 21 259 15.5 76 9 12  
## 95 28 238 6.3 77 9 13  
## 96 9 24 10.9 71 9 14  
## 97 13 112 11.5 71 9 15  
## 98 46 237 6.9 78 9 16  
## 99 18 224 13.8 67 9 17  
## 100 13 27 10.3 76 9 18  
## 101 24 238 10.3 68 9 19  
## 102 16 201 8.0 82 9 20  
## 103 13 238 12.6 64 9 21  
## 104 23 14 9.2 71 9 22  
## 105 36 139 10.3 81 9 23  
## 106 7 49 10.3 69 9 24  
## 107 14 20 16.6 63 9 25  
## 108 30 193 6.9 70 9 26  
## 109 14 191 14.3 75 9 28  
## 110 18 131 8.0 76 9 29  
## 111 20 223 11.5 68 9 30

summary(lm(Ozone~Temp+Wind,data=ozoneData))

##   
## Call:  
## lm(formula = Ozone ~ Temp + Wind, data = ozoneData)  
##   
## Residuals:  
## Min 1Q Median 3Q Max   
## -42.156 -13.216 -3.123 10.598 98.492   
##   
## Coefficients:  
## Estimate Std. Error t value Pr(>|t|)   
## (Intercept) -67.3220 23.6210 -2.850 0.00524 \*\*   
## Temp 1.8276 0.2506 7.294 5.29e-11 \*\*\*  
## Wind -3.2948 0.6711 -4.909 3.26e-06 \*\*\*  
## ---  
## Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1  
##   
## Residual standard error: 21.73 on 108 degrees of freedom  
## Multiple R-squared: 0.5814, Adjusted R-squared: 0.5736   
## F-statistic: 74.99 on 2 and 108 DF, p-value: < 2.2e-16

newdata <- ozoneData[c(1)]  
t.test(newdata,alternative = "less", mu= 50)

##   
## One Sample t-test  
##   
## data: newdata  
## t = -2.5015, df = 110, p-value = 0.006919  
## alternative hypothesis: true mean is less than 50  
## 95 percent confidence interval:  
## -Inf 47.33835  
## sample estimates:  
## mean of x   
## 42.0991