SAVEETHA SCHOOL OF ENGINEERING

SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES
ITA 0443 - STATISTICS WITH R PROGRAMMING FOR REAL TIME PROBLEM

DAY 4– LAB MANUAL Part 2

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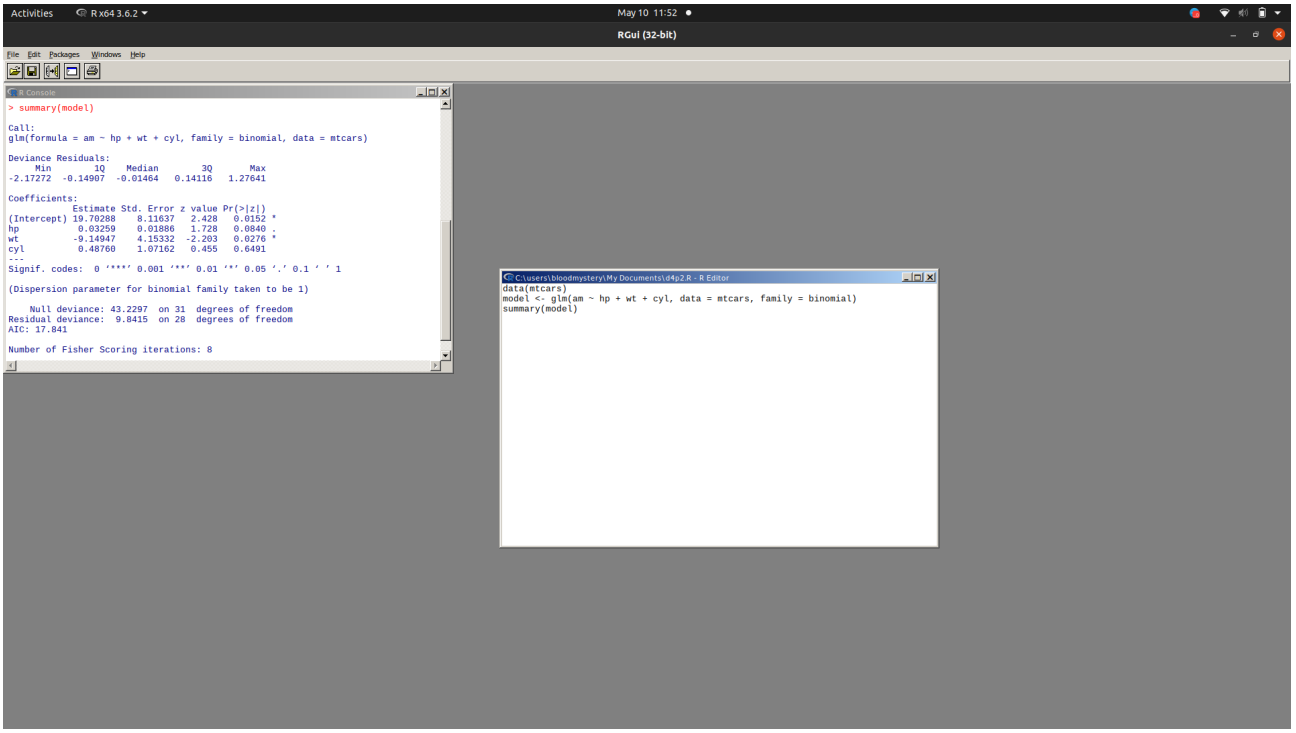
LOGISTIC REGRESSION ANALYSIS IN R

Exercise
5. Create a logistic regression model using the “mtcars” data set with the information given below.
The in-built data set "mtcars" describes different models of a car with their various engine
specifications. In "mtcars" data set, the transmission mode (automatic or manual) is described
by the column am which is a binary value (0 or 1). Create a logistic regression model between the columns "am" and 3 other columns - hp, wt and cyl.

PROGRAM:

```
data(mtcars)
model <- glm(am ~ hp + wt + cyl, data = mtcars, family = binomial)
summary(model)
```



6. Create a Poisson regression model using the in-built data set “warpbreaks” with information given below.
In-built data set "warpbreaks” describes the effect of wool type (A or B) and tension (low,
medium or high) on the number of warp breaks per loom. Consider "breaks" as the response
variable which is a count of number of breaks. The wool "type" and "tension" are taken as
predictor variables.

PROGRAM:

```
data(warpbreaks)
model <- glm(breaks ~ wool + tension, data = warpbreaks, family = poisson)
summary(model)
```