Final_exam_questions

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Lecture 8a

What functions can you use to create a sequence over colors in R??

- All of these
- `colorRampPalette`
- `colorRamp`
- `rainbow_hcl`

Lecture 8b

What functions can you use to do Principal Component Analysis in R?

- `prcomp()`, `princomp()`, `PCA()`, `dudi.pca()` and `acp()`
- Only `prcomp()`, `princomp()` and `PCA()`
- `prcomp()` can be used but gives inaccurate results. `PCA()` is the only option
- Only `PCA()`

Lecture 9a

What is the cut function used for?

- Convert numeric to factor
- Cut off the trailing floating point numbers
- Consider specific number of values from a list
- Round off numbers

Lecture 9b

Which library out of the following is useful for manipulating datasets in R, with a special focus on dataframes?

- `dplyr`
- `rgl`
- `knitr`
- `rvest`

Lecture 10a

What would be the outcome of the following code?

```
x <- runif(1000, min=-10, max=10)
y <- x^2
z <- 2*y + 5*x + 6
plot(x,z)
library(rgl)
plot3d(x,y,z)
```

- An interactive 3D plot and a 2D plot
- A 2D plot
- A 3D plot
- There is an error in the code

Lecture 10b

How many basic files are required to build a shiny application?

- 2
- 1
- 3
- 0

Lecture 11a

Which algorithm is used for density based clustering?

- DBSCAN
- Hierarchical clustering
- K-means algorithm
- Expectation–maximization algorithm

Lecture 11b

What is the outcome of the following code?

```
library(igraph)
g <- graph.formula( Alice-Bob-Cecil-Alice,Daniel-Cecil-Eugene, Cecil-Gordon )
plot(g)
```

- Undirected graph
- Directed graph
- Mixed graph
- Weighted graph

Lecture 12a

Which functions are used to fit linear models?

- `lm, glm, aov`
- `lm, glm, aov, nls`
- None of these
- `lm, glm, nls`

Lecture 12b

Which functions are used to embed a shiny application within an R Markdown?

- `shinyAppDir`, `shinyApp`
- Only `shinyAppDir`
- Only `shinyApp`
- None of these

Lecture 13a

Which of the following statements is FALSE?

- Linear regression attempts to model the relationship between independent variables.
- Logistic regression is useful when you are predicting a binary outcome from a set of continuous predictor variables.
- Poisson regression is useful when predicting an outcome variable representing counts from a set of continuous predictor variables.
- Survival analysis covers a set of techniques for modeling the time to an event.

Lecture 13b

What is the use of `dev.off()` function?

- Used to close open figure files and plotting windows
- Used to break the code run
- Used to assign value to dev attribute
- None of these

Lecture 14a

Which function out of the following can be used to calculate the False Positive Rate?

- `fall`
- `miss`
- `f`
- `pcfall`

Lecture 14b

Where is AIC (Akaike information criterion) used?

- All of these
- In model selection
- Counting parameters
- Transforming data