**Data Analysis, Modeling, Visualization (R, RStudio)**

|  |
| --- |
| **R, RStudio** |
| |  | | --- | | **R** | | **r-crash-course**  **half-day introduction to the R language**  <https://bioinformatics-core-shared-training.github.io/r-crash-course/>  **Statistical Analysis: Introduction using R**  <https://en.wikibooks.org/wiki/Statistical_Analysis:_an_Introduction_using_R>  **Data Manipulation and Visualisation using R**  **Intermediate R Course**  <http://bioinformatics-core-shared-training.github.io/r-intermediate/> |  |  | | --- | | **R / RStudio** | | **Introduction to R and RStudio** 1:31:20  <https://www.youtube.com/watch?v=lL0s1coNtRk>  **Introduction to R and RStudio part 2** 1:27:23  <https://www.youtube.com/watch?v=ZA28sOmq7nU>  **Introduction to ggplot in R** 1:17:24  <https://www.youtube.com/watch?v=1GmQ5BdAhG4>  **Cluster analysis**  <https://www.youtube.com/watch?v=PX5nSBGB5Tw>  **Principal components analysis in R** 26:48  <https://www.youtube.com/watch?v=xKl4LJAXnEA> |  |  | | --- | | **R / RStudio Machine Learning** | | **R / RStudio:**  Introduction to R and RStudio 1:31:20 <https://www.youtube.com/watch?v=lL0s1coNtRk>  Introduction to R and RStudio part 2 1:27:23 <https://www.youtube.com/watch?v=ZA28sOmq7nU>  Introduction to ggplot in R 1:17:24 <https://www.youtube.com/watch?v=1GmQ5BdAhG4>  Cluster analysis <https://www.youtube.com/watch?v=PX5nSBGB5Tw>  Principal Components Analysis in R0**:**26:48 <https://www.youtube.com/watch?v=xKl4LJAXnEA>  **Tidyverse:** <https://www.tidyverse.org/>  - dplyr <https://dplyr.tidyverse.org/>  - tidyr <https://tidyr.tidyverse.org/>  - tibble <https://tibble.tidyverse.org/>  **Introduction to dplyr**  <https://dplyr.tidyverse.org/articles/dplyr.html>  **Data Transformation with dplyr: Cheat Sheet**  <https://github.com/rstudio/cheatsheets/blob/master/data-transformation.pdf> | |

|  |
| --- |
| **RStudio** |
| |  | | --- | | **Report Generation** | | **R Markdown: The Definitive Guide** 2020-12-14  <https://bookdown.org/yihui/rmarkdown/notebook.html>  **Pandoc**  <http://pandoc.org>  convert files from one markup format into another  **knitr**  <https://yihui.org/knitr/>  dynamic report generation with R  embed code chunks (of R or other languages) in Markdown documents. |  |  | | --- | | **Publication** | | **Bookdown**  <https://bookdown.org/>  Write HTML, PDF, ePub, and Kindle books with R Markdown  **blogdown: Creating Websites with R Markdown**  2020-12-11  <https://bookdown.org/yihui/blogdown/>  <https://github.com/rstudio/blogdown> | |