**Class 02 Notes**

**Slide 1-3: Introduction and Recap (5 minutes)**

* Welcome students and briefly recap the previous class
* Highlight the importance of data visualization and BI methodology
* Use the Taylor Swift image to emphasize the point about 3D charts being problematic
* Talk about assignment 01

**Slides 4-9: Introduction to R and Its Importance (10 minutes)**

* Explain the learning objectives for today's class
* Discuss the pedagogy behind using R in this course
* Emphasize R as a general-purpose programming language with extensive package support
* Explain the importance of hands-on practice, documentation, and problem-solving skills

**Slides 10-13: RStudio Interface and Project Setup (10 minutes)**

* Introduce the RStudio interface and its components
* Guide students through setting up RStudio for optimal use
* Explain the concept of projects in R and their importance in organizing work

**Slides 14-19: R Basics: Operators and Syntax (10 minutes)**

* Cover assignment operators and their usage
* Discuss common errors in R and how to avoid them
* Explain arithmetic and logical operators
* Emphasize the importance of good coding style

**Slides 20-30: Data Types and Structures in R (15 minutes)**

* Introduce R as a vector language
* Explain different data types: logical, numeric, integer, character
* Discuss atomic vectors and their properties
* Introduce lists and their flexible nature
* Explain matrices and their properties

**Slides 31-41: Advanced Data Structures (15 minutes)**

* Introduce data frames and their importance in data analysis
* Explain the concept of tibbles as modern data frames
* Discuss the differences between data frames and tibbles
* Demonstrate how to create and manipulate these structures

**Slides 42-46: Functions in R (10 minutes)**

* Explain the basic structure of functions in R
* Demonstrate how to use built-in functions
* Show how to access function help pages
* Explain function arguments and how to specify them
* Introduce the concept of writing custom functions

**Slides 47-48: Demo and First Script (5 minutes)**

* Conduct a brief demo of creating a first R script
* Guide students through the process of writing and running a simple script

**Slides 49-51: Recap and Preparation for Next Class (5 minutes)**

* Summarize the main points covered in the lecture
* Provide instructions for preparing for the next class
* Mention the assignment to be completed