

# BINF 5003: Data Mining, Modeling, and Biostatistics

Week 11

Introduction to R Markdown

# R Markdown

- **Overview**

- R Markdown is an extension of Markdown, a lightweight markup language, that allows you to include R code chunks within your document. It can generate various outputs like HTML, PDF, Word, and more

- **Why Use R Markdown?**

- **Reproducibility:** Combines code and results in a single document.
- **Versatility:** Supports multiple output formats.
- **Professional Presentation:** Allows seamless integration of text, code, tables, and plots.

# Basic Structure of an R Markdown Document

- **1. YAML Header**
- At the top of the document, the YAML header specifies the document's metadata, like the title, author, and output format

```
---  
title: "Introduction to R Markdown"  
author: "Your Name"  
date: "Today's Date"  
output: html_document  
---
```

# Basic Structure of an R Markdown Document

- **2. Markdown Text**
- **Headers:** #, ##, ###
- **Bold:** **\*\*bold\*\***
- **Italic:** *\*italic\**
- **Lists:** - for unordered, 1. for ordered
- **Links:** [text](url)

```
# Section Title
```

```
This is **bold** text and this is *italic* text.
```

```
Here is a [link to R Markdown resources](https://rmarkdown.rstudio.com).
```

```
- Item 1
```

```
- Item 2
```

# Basic Structure of an R Markdown Document

- **3. Code Chunks**
- Code chunks are enclosed within triple backticks `` with {r} to specify R as the language.

```
```${r} glob_vars, results = 'hide', message = FALSE, warning=FALSE , echo=FALSE}
```



```
psp_id = params$pdo  
screen = "Fdrc"
```

```
```
```

# Basic Structure of an R Markdown Document

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```
```
```

# Basic Structure of an R Markdown Document

- `###` Explanation of the Options:
- - ``echo = TRUE``: Shows the R code in the output. Set to ``FALSE`` if you want to hide the code.
- - ``results = 'hide'``: Hides the results/output of the code chunk. Use ``show`` to display them.
- - ``message = FALSE``: Suppresses messages generated by the code.
- - ``warning = FALSE``: Suppresses warnings generated by the code.
- - ``cache = TRUE``: Caches the chunk's output to avoid re-executing the code unless it changes.
- - ``fig.width`` and ``fig.height``: Sets the dimensions (in inches) of the output plot.

Let's practice!