

SOC 4930/5050: Week 02, Lecture 03 Functions

Quick Reference

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Packages

- base
- tidyverse
 - dplyr
 - magrittr
- utils

Verbs for Cleaning Data

Rename Variables

```
dplyr::rename(dataFrame, newName = oldName)
```

Reorder Variables, Low to High

```
dplyr::arrange(dataFrame, varlist)
```

varlist items should be separated by commas

Reorder Variables, High to Low

```
dplyr::arrange(dataFrame, desc(varlist))
```

varlist items should be separated by commas

Subset Data, Specific Observations

```
dplyr::filter(dataFrame, expression)
```

Subset Data, Keep Specific Variables

```
dplyr::select(dataFrame, varlist)
```

varlist items should be separated by commas

Subset Data, Drop Specific Variables

```
dplyr::select(dataFrame, -varlist)
```

varlist items should be separated by commas with each item individually labeled with the dash drop symbol

*Verbs for Cleaning Data (con't)**Create New Variables*

```
dplyr::mutate(dataFrame, newVar = expression)
```

ifelse Outcomes

```
base::ifelse(expression, trueOutcome, falseOutcome)
```

*Pipe Operator**Basic Syntax*

```
%>% - "then"
```

Example with Assignment

```
mpg %>%
  select(manufacturer, model, cty, hwy) %>%
  rename(cityMpg = cty) %>%
  rename(hwyMpg = hwy) -> autoData
```

Remember that dataFrame names do not need to be included for many functions when included in piped code

Logical Operators

```
& - "and"
```

```
| - "or"
```

Relational Operators

```
< - "less than"
```

```
<= - "less than or equal to"
```

```
> - "greater than"
```

```
>= - "greater than or equal to"
```

```
== - "exactly equal to"
```

```
!= - "not equal to"
```

Arithmetic Operators

+ - "addition"
- - "subtraction"
* - "multiplication"
/ - "division"
^ - "exponentiation"

Viewing Observations

First Six Observations

```
utils::head(dataFrame)
```

Last Six Observations

```
utils::tail(dataFrame)
```

Viewing Data Frames

```
utils::View(dataFrame)
```

Frequency Tables

```
base::table(dataFrame$var)
```