

# Prediction 1 - tidyverse

Anna Yorozuya

University of Tokyo

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# stringr package

## stringr package

- a package in tidyverse for manipulating strings
- here we use the function `str_c()`
- for more information, see [here](#)

## str\_c function

- combining multiple objects into a character string
- each object will be separated by commas

## Example

```
a <- 2
b <- 6
print(str_c(a, " times 3 is equal to ", b))

## [1] "2 times 3 is equal to 6"
```

# lubridate package

## lubridate package

- a package in tidyverse for dates-times object
- for more information, see [here](#)

## ymd function

- converting strings in the format of year-month-date into a date object
- when subtracting a date object from another, the object will be a `difftime` object.

# lubridate package - Example

```
# Converting an object into a date object
```

```
x <- ymd("2008-11-04")
```

```
y <- ymd("2008/9/1")
```

```
class(x)
```

```
## [1] "Date"
```

```
# When subtracting a date object from another,
```

```
# it will be a `difftime` object
```

```
subtraction <- x - y
```

```
class(subtraction)
```

```
## [1] "difftime"
```

# Combining objects (data frame, vector, or matrix)

## base R function

- `cbind(x, y)`: combine x and y by columns
- `rbind(x, y)`: combine x and y by rows
- `merge(x, y, by = )`: merging two data frames by common columns or row names

## tidyverse function bind (be careful!)

- `bind_cols(x, y)`: combine x and y by columns
- `bind_rows(x, y)`: combine x and y by rows

## tidyverse function mutate-joins

- `inner_join(x, y, by = )`: includes all rows in x and y
- `left_join(x, y, by = )`: includes all rows in x
- `right_join(x, y, by = )`: includes all rows in y
- `full_join(x, y, by = )`: includes all rows in x or y