

Control Flow in R: Takeaways

by Dataquest Labs, Inc. - All rights reserved © 2020

Concepts

- Control flow is a form of decision making in code. Using comparison operators, we can decide what code to run based on if a value satisfies a given condition.
- The `if` statement provides us with a way to implement a *branching path* structure to our code. The `if_else()` and `case_when()` functions are vectorized implementations of the `if` statements, which we can use to create new columns in our dataset based on control flow.

Syntax

- An

```
if
```

statement can be written like the following:

```
if (insert comparison operator here) {  
  print("Code to run if the comparison operator is TRUE")  
} else {  
  print("Code to run if the comparison operator is FALSE")  
}
```

- The

```
if_else()
```

function vectorizes a simple two-branch decision tree:

```
new_recent_grads <- recent_grads %>%  
  mutate(  
    is_engineering = if_else(Major_category == "Engineering", TRUE, FALSE)  
  )
```

- To create a multiple comparison in an

```
if_else()
```

function, you must use

```
&
```

and

```
|
```

instead of

```
&&
```

and

- The

```
case_when()
a <- 1.5 b <- 4.0 c <- 11 else(a > 2 & b > 5, TRUE, FALSE)
#> [1] FALSE FALSE TRUE
```

function vectorizes a more complex, 2+ branch decision tree:

```
new_recent_grads <- recent_grads %>%
  mutate(
    size_classification = case_when(
      Total < 2000 ~ "Small",
      Total > 20000 ~ "Large",
      TRUE ~ "Medium"
    )
  )
```

- The

```
%in%
```

operator helps us create a comparison operator based on a membership test. If a value is in a given collection, then it will evaluate to

```
TRUE
```

```
FALSE
```

, otherwise.

```
recent_grads %>%
  filter(
    Major %in% c("AEROSPACE ENGINEERING", "BIOMEDICAL ENGINEERING", "CHEMICAL
ENGINEERING")
  )
```

- We can use the ! character to invert logical values and comparison operators. `x <- 10`
`x == 10 [1] TRUE`
`!(x == 10) [1] FALSE`



Takeaways by Dataquest Labs, Inc. - All rights reserved © 2020