

Tidy Data

Long Format		
Airport	Year	Number_Flights
JFK	2017	200
JFK	2018	300
JFK	2019	400
ORD	2017	300
ORD	2018	250
ORD	2019	600
SJU	2017	440
SJU	2018	201
SJU	2019	300



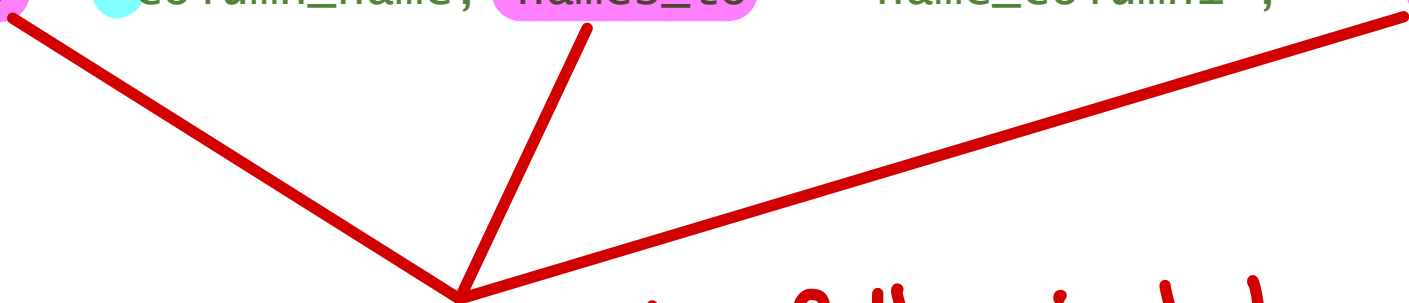
Wide Format			
Airport	2017	2018	2019
JFK	200	300	400
ORD	300	250	600
SJU	440	201	300

`pivot_longer()` Function

Command Illustration

```
new_dataframe <- wide_dataframe %>%  
  pivot_longer(cols = -column_name, names_to = "name_column1",  
               = "name_column2")
```

arguments of the pivot_longer
function



Wide Format			
Airport	2017	2018	2019
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Long Format		
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ORD	2018	250
ORD	2019	600
SJU	2017	440
SJU	2018	201
SJU	2019	300

example <- wide_data %>%
 pivot_longer(
 cols = -Airport,
 names_to = "Year",
 values_to = "Num_Flights")
 ↪ creates new columns

Example 1: Use `pivot_longer` to reshape the following wide data

Country	2018	2019	2020
USA	250	260	270
Canada	180	190	200

First write out what the output should look like and then write the code that should make that happen.

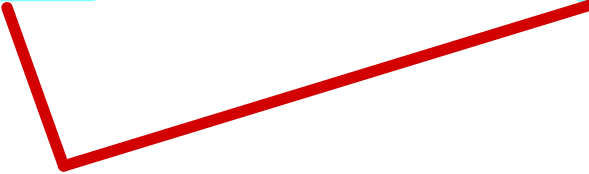
Country	Year	Value
USA	2018	250
USA	2019	260
USA	2020	270
Canada	2018	180
Canada	2019	190
Canada	2020	200

Code: `example_1 <- wide_data %>%
 pivot_longer(
 cols = -Country,
 names_to = "Year",
 values_to = "Value")`

`pivot_wider()` Function

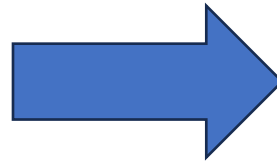
Command Illustration

```
new_dataframe <- long_dataframe %>%  
  pivot_wider(names_from = column_name1, values_from = column_name2)
```



arguments of the pivot_wider
function

Long Format		
Airport	Year	Number_Flights
JFK	2017	200
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JFK	2019	400
ORD	2017	300
ORD	2018	250
ORD	2019	600
SJU	2017	440
SJU	2018	201
SJU	2019	300



Wide Format			
Airport	2017	2018	2019
JFK	200	300	400
ORD	300	250	600
SJU	440	201	300

example <- long-data %>%
 pivot_wider(
 names_from = Year,
 values_from = Number_Flights)

Example 2: Use `pivot_wider` to reshape the data

Country	Year	Value
USA	2018	250
Canada	2018	260
USA	2019	270
Canada	2019	180
USA	2020	190
Canada	2020	200

First write out what the output should look like and then write the code that should make that happen.

Country	2018	2019	2020
USA	250	270	190
Canada	260	180	200

Code: `example_2 <- long-data %>%
 pivot_wider(
 names_from = Year,
 values_from = Value)`