

DATA SCIENCE WITH R

Class 4 – Data Manipulation in R

Topic 6

★ **Transposing data using
reshape2()** ★

INDEX

Manipulating data using base R

Using dplyr to manipulate data

Working with date objects

Merging tables

Missing value treatment



Using reshape2() to transpose data

Manipulating Character Strings

Using sqldf

Transposing data: reshape2()

Transposing data

- Understanding wide and long data formats
- Converting data in wide format to long
- Converting data in long format to wide

Transposing data

- Understanding wide and long data formats
- Most structured data is in wide format: Variables are columns and Row labels identify observations

Person	Age	Weight
Sankar	26	70
Aiyar	24	60
Singh	25	65

Transposing data

- Understanding wide and long data formats
- The same data can be represented as follows (long format)

Persons	Variable	Value
Sankar	Age	26
Sankar	Weight	70
Aiyar	Age	24
Aiyar	Weight	60
Singh	Age	25
Singh	Weight	65

Transposing data

- Converting a wide format data to long format: melt()

```
> library(reshape2)
> person<-c("Sankar","Aiyar","Singh")
> age<-c(26,24,25)
> weight<-c(70,60,65)
> wide<-data.frame(person,age,weight)
> wide
```

	person	age	weight
1	Sankar	26	70
2	Aiyar	24	60
3	Singh	25	65

Transposing data

- Converting a wide format data to long format: melt()

```
> melt(wide)
Using person as id variables
  person variable value
1 Sankar      age    26
2  Aiyar      age    24
3  Singh      age    25
4 Sankar     weight   70
5  Aiyar     weight   60
6  Singh     weight   65
> melt(wide,id.vars="person")
  person variable value
1 Sankar      age    26
2  Aiyar      age    24
3  Singh      age    25
4 Sankar     weight   70
5  Aiyar     weight   60
6  Singh     weight   65
```

Transposing data

- Converting a wide format data to long format: melt()

```
> melt(wide,id.vars="person",variable.names="Demographics",value.name ="Demo_value" )
  person variable Demo_value
1 Sankar      age         26
2 Aiyar      age         24
3 Singh      age         25
4 Sankar    weight         70
5 Aiyar    weight         60
6 Singh    weight         65
> melted<-melt(wide,id.vars="person",variable.names="Demographics",value.name ="Demo_value" )
```

Transposing data

- Converting a long format data to wide format: dcast()

```
> dcast(melted, person~variable, value.var = "Demo_Value")
```

	person	age	weight
1	Aiyar	24	60
2	Sankar	26	70
3	Singh	25	65

RECAP

- Understanding wide and long data formats
- Converting data in wide format to long
- Converting data in long format to wide