Socio-Informatics 348

Data Transformation with the Tidyverse
Visualising the Transformations

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Useful Visualisations

- Visualisations created by or adapted from Garrick Aden-Buie
- Useful for understanding how some dplyr transformations work

Mutate

df |>

cat1	cat2	x
a	j	1
a	j	2
a	k	3
b	j	4
b	k	5
b	k	6
c	j	7
c	j	8
c	k	9

mutate(y = x - min(x))

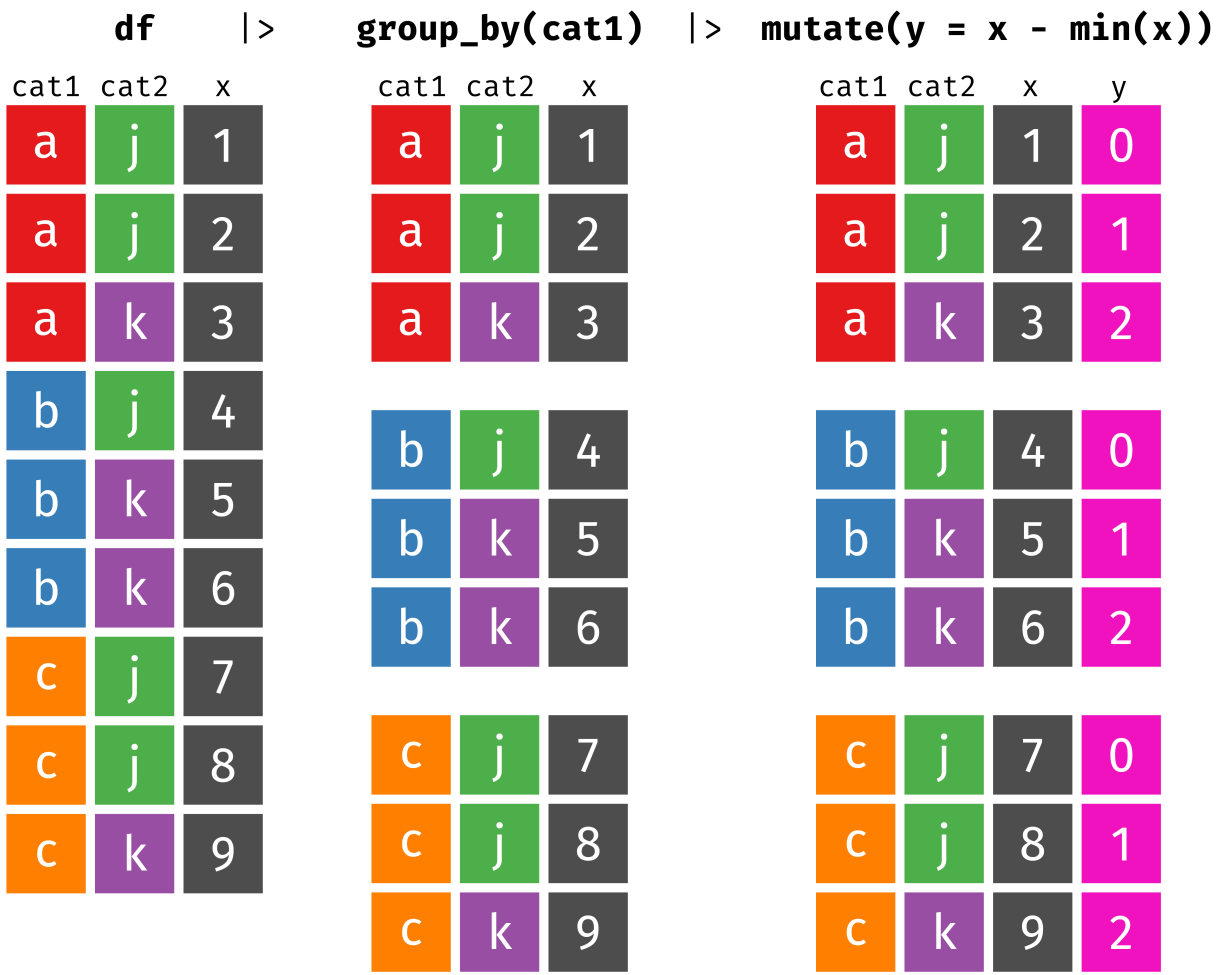
cat1	cat2	x	y
a	j	1	0
a	j	2	1
a	k	3	2
b	j	4	3
b	k	5	4
b	k	6	5
c	j	7	6
c	j	8	7
c	k	9	8

```
df |>
  mutate(
    y = x - min(x)
  )
```

```
df |>
  mutate(
    y = x - min(x),
    .after = cat2)
```

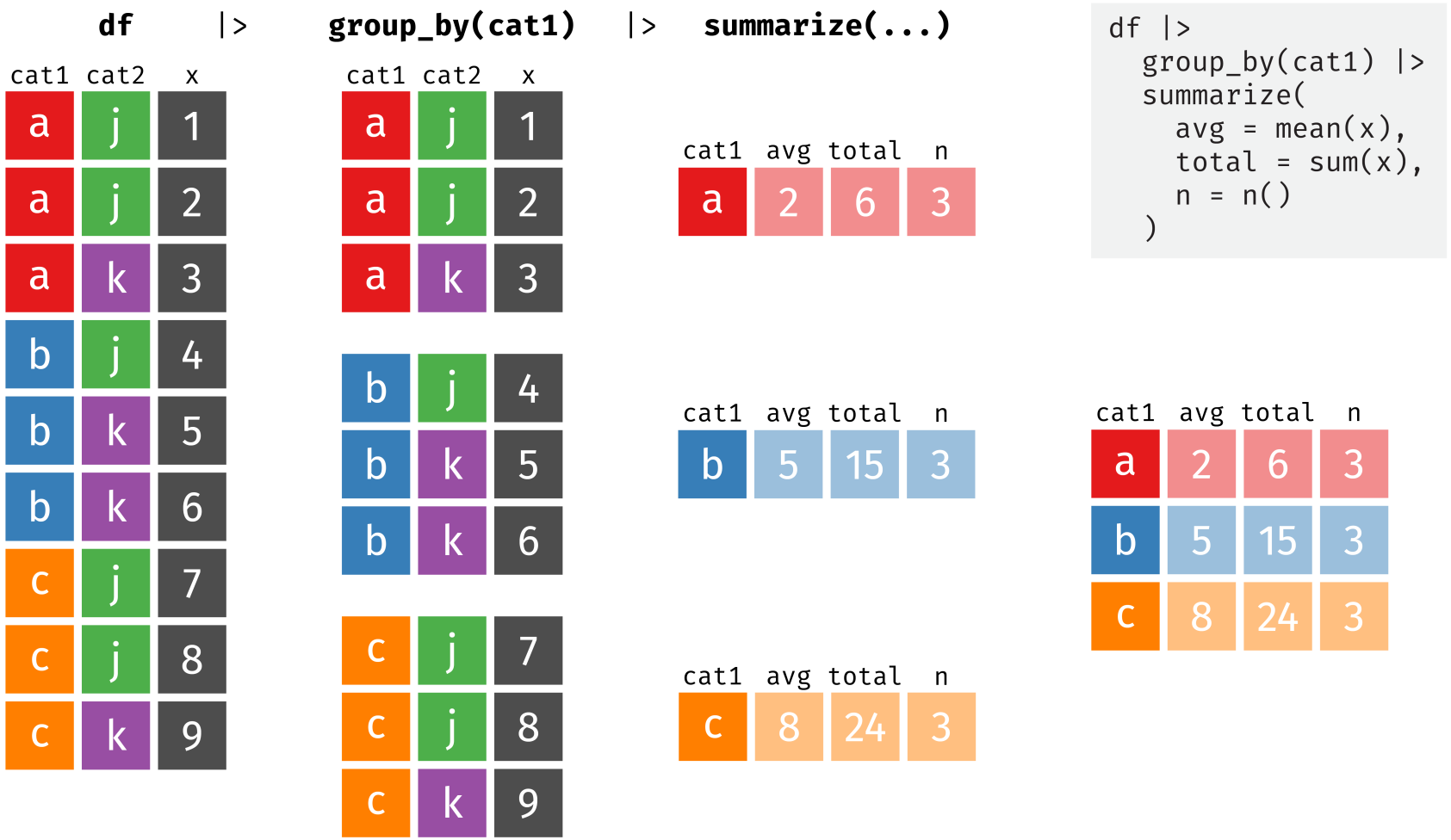
cat1	cat2	y	x
a	j	0	1
a	j	1	2

Group and mutate




```
df |>
  group_by(cat1) |>
  mutate(
    y = x - min(x)
  )
```

Group and summarise I



Group and summarise II

df |> **group_by(cat2)** |> **summarize(...)**

cat1	cat2	x
a	j	1
a	j	2
a	k	3
b	j	4
b	k	5
b	k	6
c	j	7
c	j	8
c	k	9

cat1	cat2	x
a	j	1
a	j	2
b	j	4
c	j	7
c	j	8

cat1	cat2	x
a	k	3
b	k	5
b	k	6
c	k	9

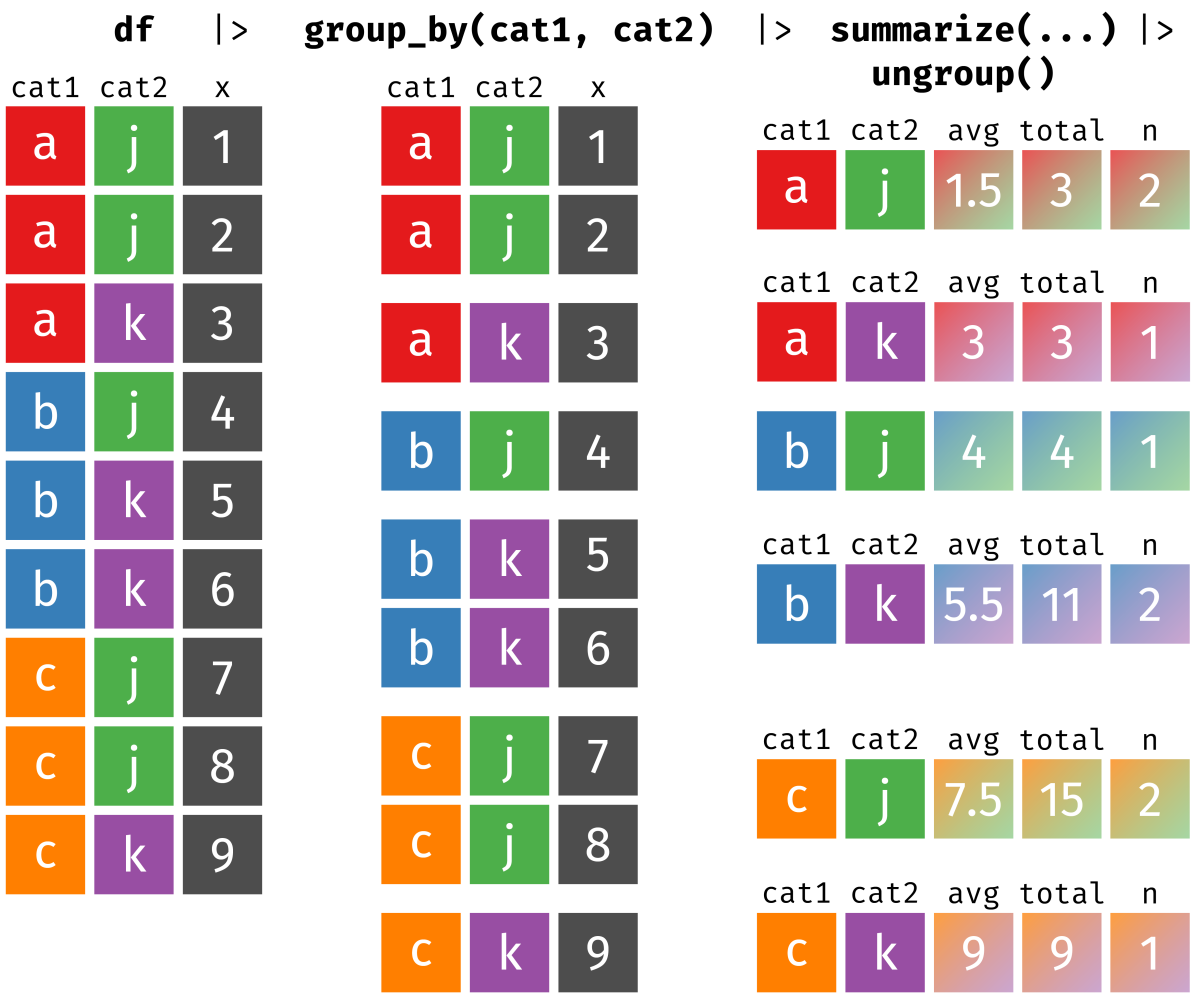
cat2	avg	total	n
j	4.4	22	5

cat2	avg	total	n
k	5.75	23	4

```
df |>
  group_by(cat2) |>
  summarize(
    avg = mean(x),
    total = sum(x),
    n = n()
  )
```

cat2	avg	total	n
j	4.4	22	5
k	5.75	23	4

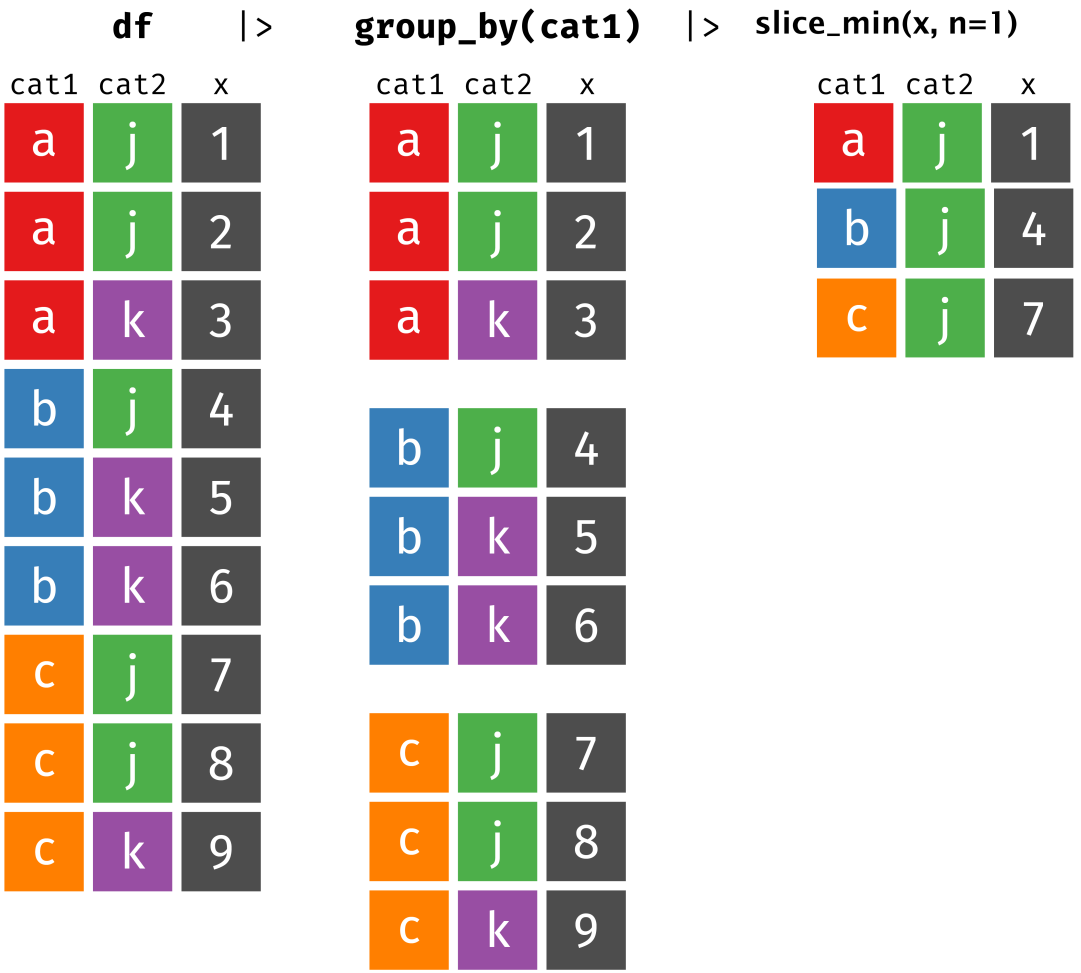
Group and summarise III




```
df |>
  group_by(cat1, cat2) |>
  summarize(
    avg = mean(x),
    total = sum(x),
    n = n()
  ) |>
  ungroup()
```

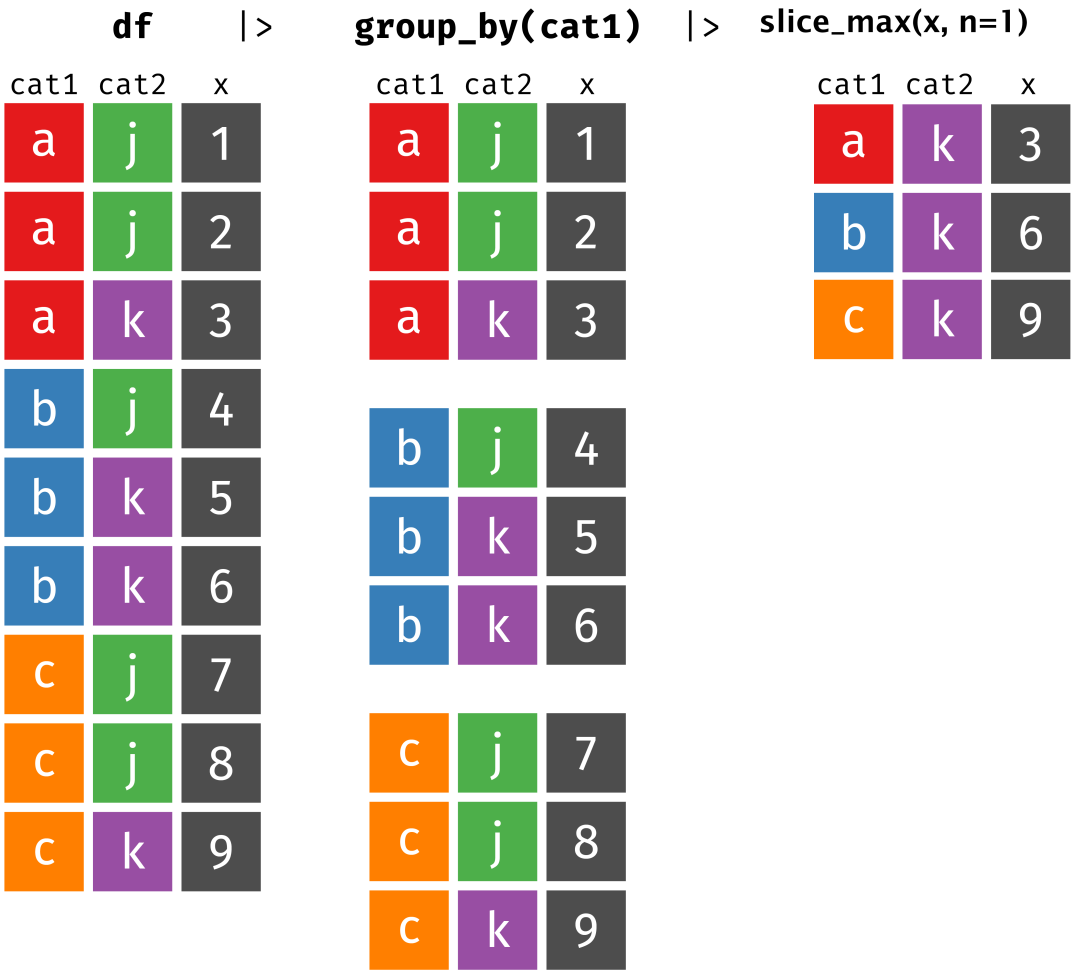
cat1	cat2	avg	total	n
a	j	1.5	3	2
a	k	3	3	1
b	j	4	4	1
b	k	5.5	11	2
c	j	7.5	15	2
c	k	9	9	1

Group and slice - min




```
df |>
   group_by(cat1) |>
   slice_min(x, n=1)
```

Group and slice - max




```
df |>
  group_by(cat1) |>
  slice_max(x, n=1)
```