Aggregating table() over multiple columns in R without a “by” breakdown

I have a 2-column data frame of x- and y-coordinates of points. I want to generate a table of the number of occurrences of each point. Using the `table()` command produces a table for all possible x-y pairs. I can eliminate the extras with

```
fullTable <- table(coords)
smalLTable <- subset(fullTable, fullTable > 0)
```

And then I'm sure I could do a little something with `dimnames(fullTable)` to get the appropriate coordinates, but is there a better way? Something built in? Something that with

```
coords <- data.frame(x = c(1, 1, 2, 2, 3, 3), y = c(1, 1, 2, 1, 1, 1))
```

would return

```
x y count
1 1 2
2 1 1
2 2 1
3 1 2
```

Thanks!

r table aggregate data.table

edited Sep 10 '12 at 5:04
mnel
67.7k 8 154 169

asked Sep 11 '11 at 16:09
Gregor
28.1k 4 43 86

6 Answers

Using just Vanilla R, you can do

```
aggregate(rep(1, nrow(coords)), by = list(x = coords$x, y = coords$y), sum)
```

edited Sep 11 '11 at 17:51

answered Sep 11 '11 at 17:29
adamleerich
2,862 9 13

Exactly what I was looking for. Thanks! – Gregor Sep 12 '11 at 3:50

1 `coords` is a data.frame (which is already a list), so a slightly shorter solution would be: `aggregate(coords$x, by=coords, length)` . – Joshua Ulrich Sep 12 '11 at 4:12

Better than ddply is `count` :

```
library(plyr)
count(coords)
```

It's a lot faster than table for sparse 2d results too.

answered Sep 14 '11 at 1:12

hadley
54.1k 13 107 173

You can use `ddply` from the `plyr` library

```
plyr::ddply(coords, .(x, y), summarize, count = length(x))
```

answered Sep 11 '11 at 17:39

Ramnath
33.9k 5 75 113

You could also use `data.table`

```
library(data.table)
DT <- data.table(coords)
DT[,.N,by=list(x,y)]
##   x y N
## 1: 1 1 2
## 2: 2 2 1
## 3: 2 1 1
## 4: 3 1 2
```

See this answer for more details on the use of `.N` and creating frequency tables with `data.table`

answered Sep 10 '12 at 5:04

mnel
67.7k 8 154 169

Adding a `dplyr` method:

```
library(dplyr)
group_by(coords, x, y) %>%
  summarize(count = n())
```

answered Jun 8 '15 at 15:57

Gregor
28.1k 4 43 86

---

answer by adamleerich works well and fast.

in comparison aggregate(coords, by = list(x = coords$x, y = coords$y), FUN = length) takes a loooot of time

answered Jan 11 at 13:46

Rajesh Gautam PhD
131 1 5

Comments may not be posted as answers on StackOverflow. Users earn the privilege of commenting by participating through questions, answers and editing activities. – Mogsdad Jan 11 at 13:54

1 This does not provide an answer to the question. To critique or request clarification from an author, leave a comment below their post. - From Review – Anton Jan 11 at 16:35
