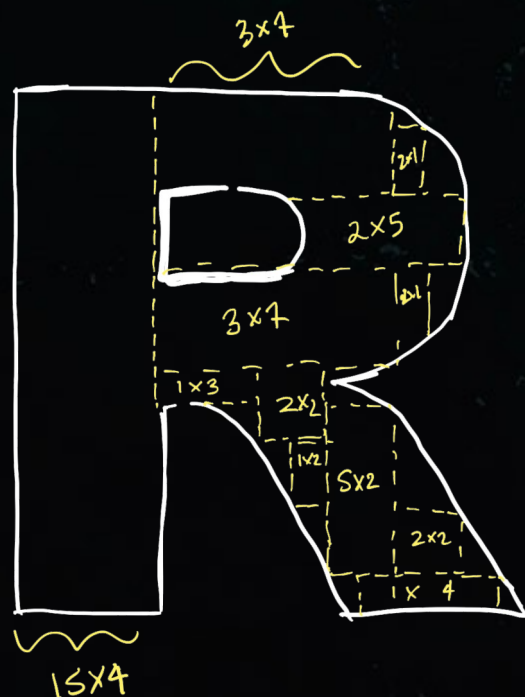# Introduction to R

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内容 *Content*

- 对象类型
  Types of *objects*

- 什么是数据框（dataframe）?
  ¿what is a dataframe?

- 整洁数据（Tidy data）:正确组织数据的规则
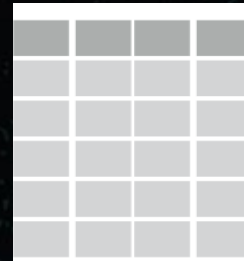 *Tidy data. Rules for organizing your data properly*

Objects

Types of Objects

- Single Value

- Vector
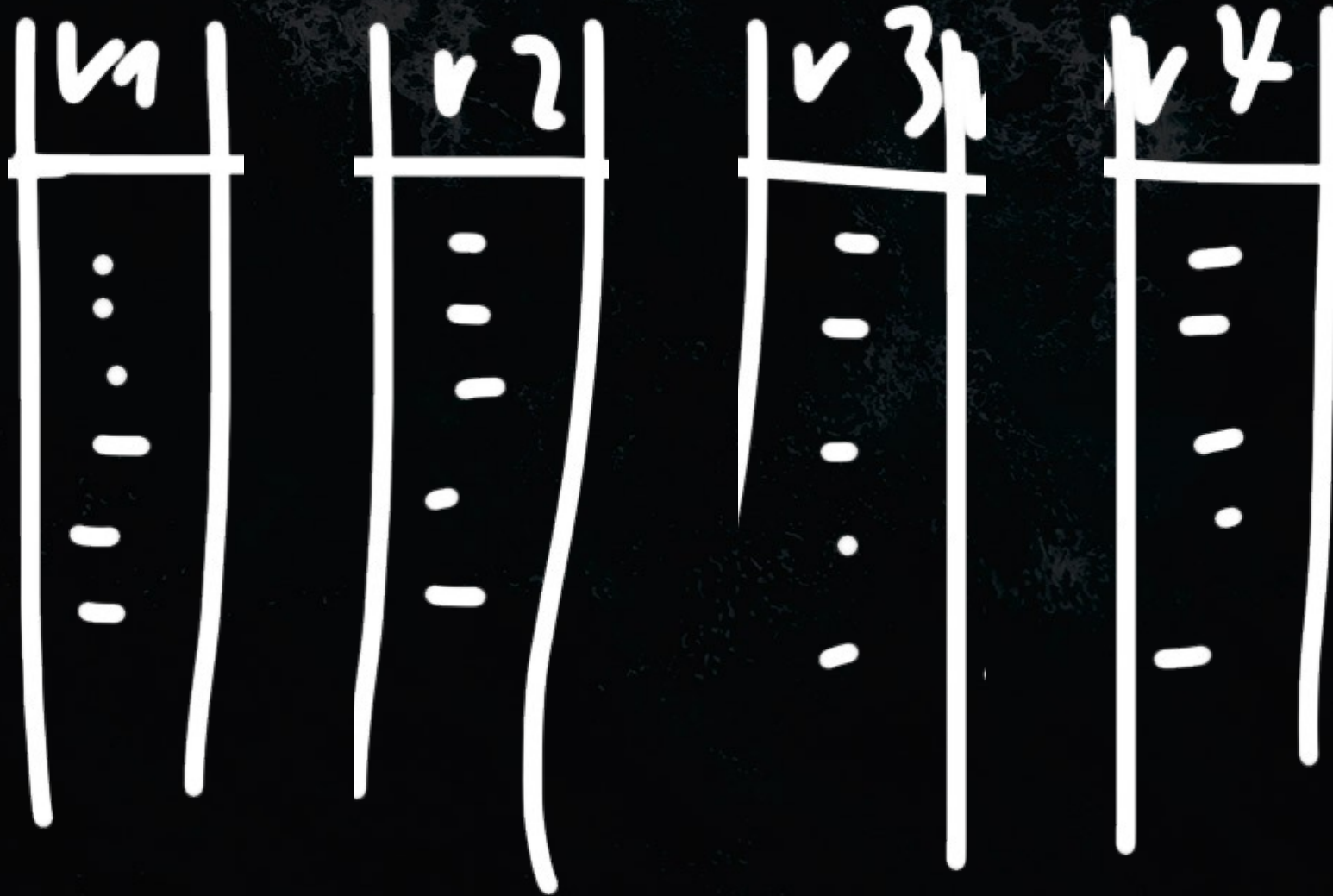
- Dataframe

Types of Objects

- Data frame

Grouped Vectors

Variables & Observations

$

data$variable1
data$variable2
data$variable3

Tidy Dataframe

Simple, plain, complete

- Use the Rules for Names

- Unify labels

- Check spelling and writing

- No empty cells

- ONLY RAW DATA

- No extra information (average, graphs, etc)

- Missing Values as NA

Tidy Data

NA

Missing Data

- Lost Sample

- Lost Number

- Sample not measured

- Experimental error

NO Tidy Data

Empty cells, special characters

	A	B	C	D	E	F
1	fecha	n.obs	vel.max	vel.media	dir	
2	2013-06-30 10:50:00	612	45.6	27.7	NW	
3	2013-07-07 10:50:00	608	33.3	19.1	NW	
4	2013-08-08 10:50:00	514	NA	30.5	NW	
5	2013-08-17 10:50:00	508	NA	33.7	NW	
6	2013-09-25 10:50:00	567	50.6	3.3	NW	
7	2013-10-20 10:50:00	539	66.2	21.9	NW	
8	2013-11-21 10:50:00	430	93.1	38.4	NA	
9	2013-12-07 10:50:00	584	52.4	24.7	NA	
10	2013-12-23 10:50:00	588	53.5	18.1	NW	
11	2014-04-21 10:50:00	539	26.8	14.4	NW	
12	2014-06-17 10:50:00	454	NA	NA	NA	
13	2014-06-24 10:50:00	394	NA	NA	NA	
14	2014-07-10 10:50:00	654	NA	NA	NA	
15	2014-07-26 10:50:00	568	NA	NA	NA	
16	2014-08-04 10:50:00	641	42.4	32.9	NW	
17	2014-08-20 10:50:00	125	54.4	16.6	NW	
18	2014-08-27 10:50:00	109	16.5	7.4	NW	
19	2014-09-12 10:50:00	72	49.5	17.5	NW	
20	2014-11-15 10:50:00	554	41.3	7.4	NW	
21	2014-11-24 10:50:00	206	45.4	NA	NA	
22	2014-12-01 10:50:00	622	40.5	16.6	NW	
23						
24						
25						
26						

Tidy Data

Simple, plain, complete, use of NA

Praxelis Data