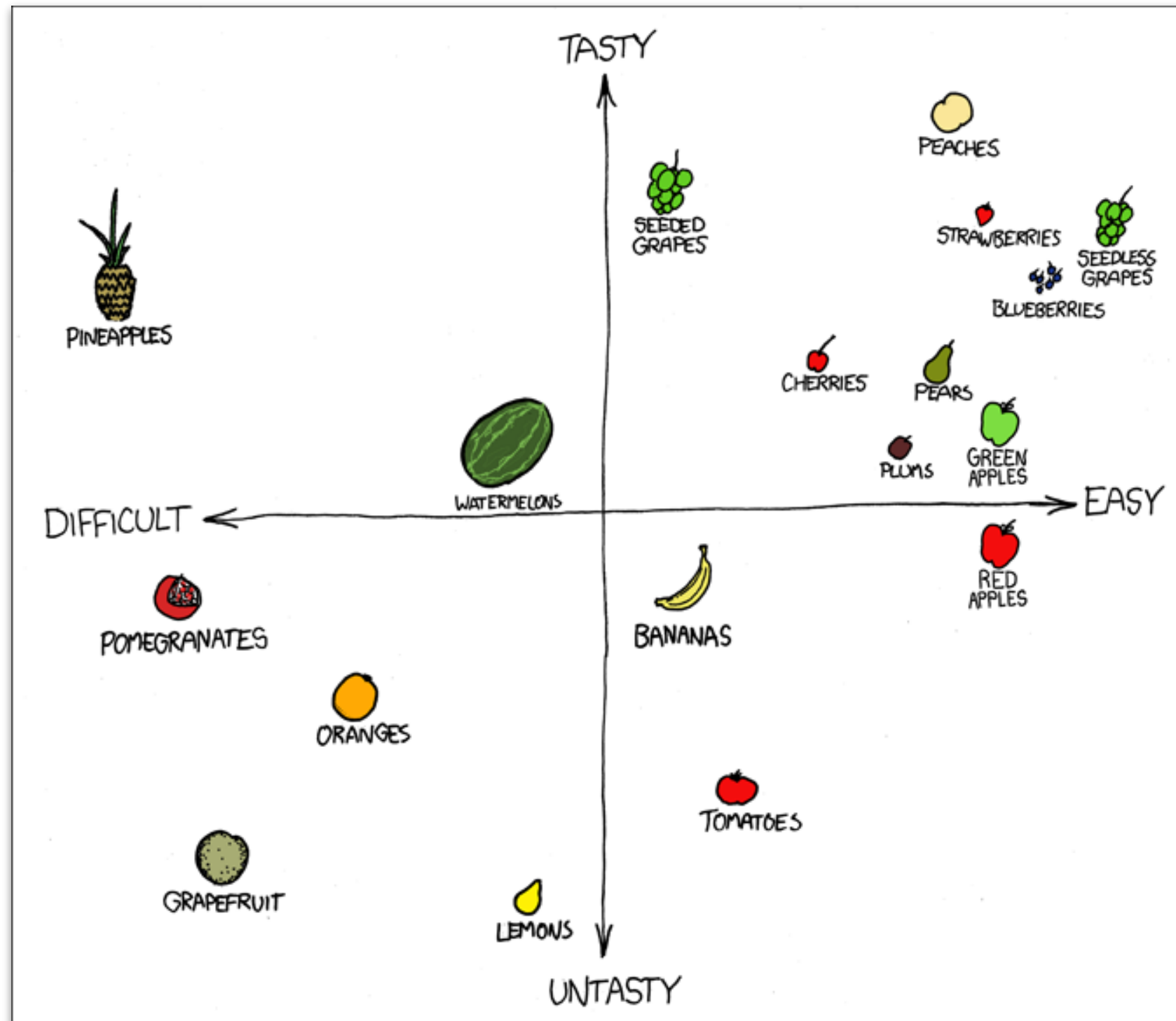


Visualization 1

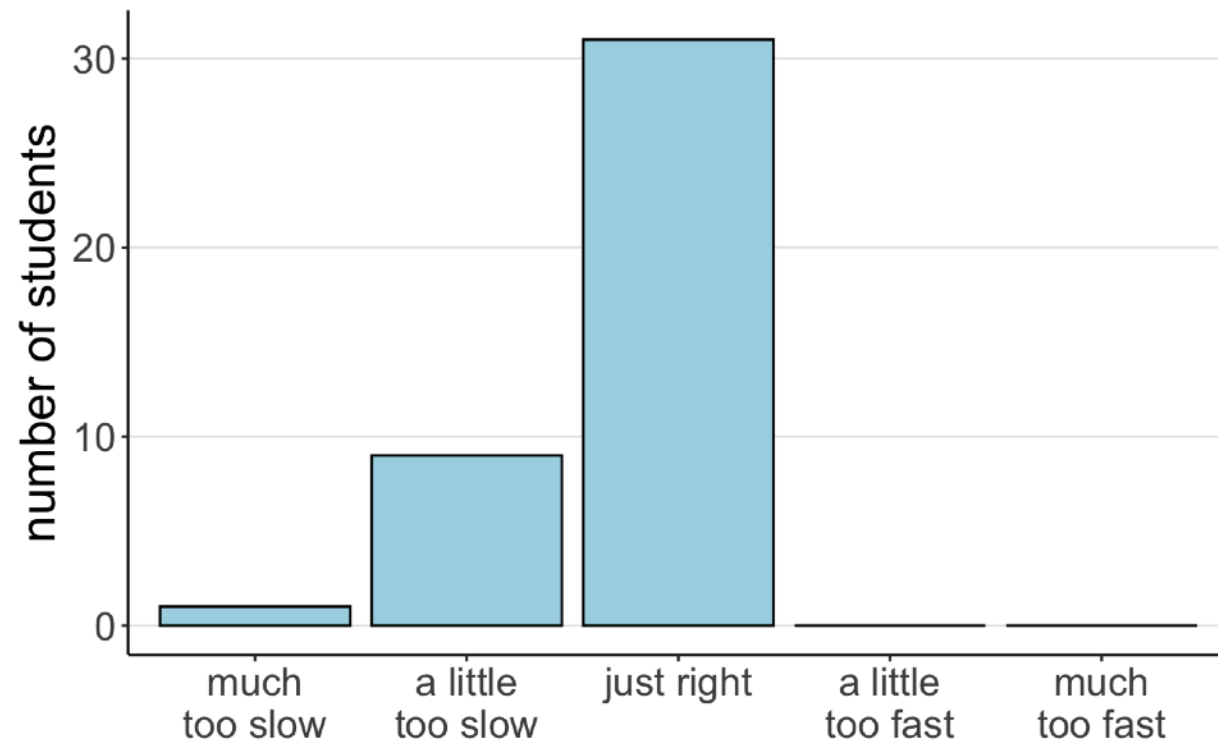


01/08/2020

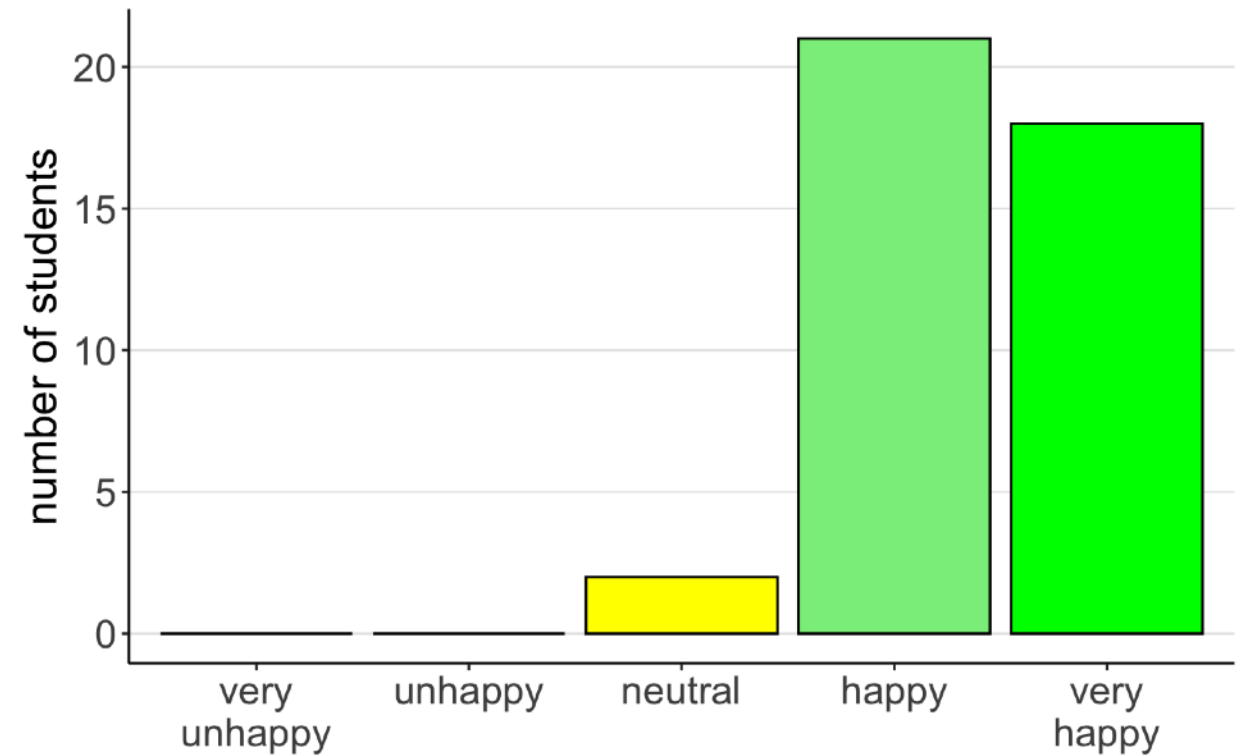
Your feedback

Your feedback

How was the pace of today's class?



How happy were you with today's class overall?



Your feedback

I appreciated when you gave us time to discuss things in small groups and then talk about them as a full lecture. Specifically, when we were going through the plots and looking at what was wrong with each one.

I enjoyed the moments where we got to chat with the people sitting next to us. I think today's class provided a good beginning foundation for what the class will be.

I'll try to keep it up!

Your feedback

The professor and teaching staff are clearly enthusiastic (and enthusiasm is contagious - I'm excited too!). **However, attending 2 sections per week seems like a lot.** How much are the Thursday sections (application sections) recommended? Could those be discussed a little more during the next class?

I'll provide a quick outlook of what's going to be covered on Wednesdays
sections are strongly recommended

Your feedback

I liked the syllabus. I'm really looking forward to learning all these interesting tools to use them in my research. I get distracted when people eat in class and I'd appreciate it if the rule "no food or drinks" could be respected.

**i'd say drinking should be fine but ideally no food
(unless you win a cereal bar in one of our competitions)**

Your feedback

Would have appreciated more detail on the project. **When are we expected to form groups?**

you can start forming groups as early as now
Project proposal is due on February 18th

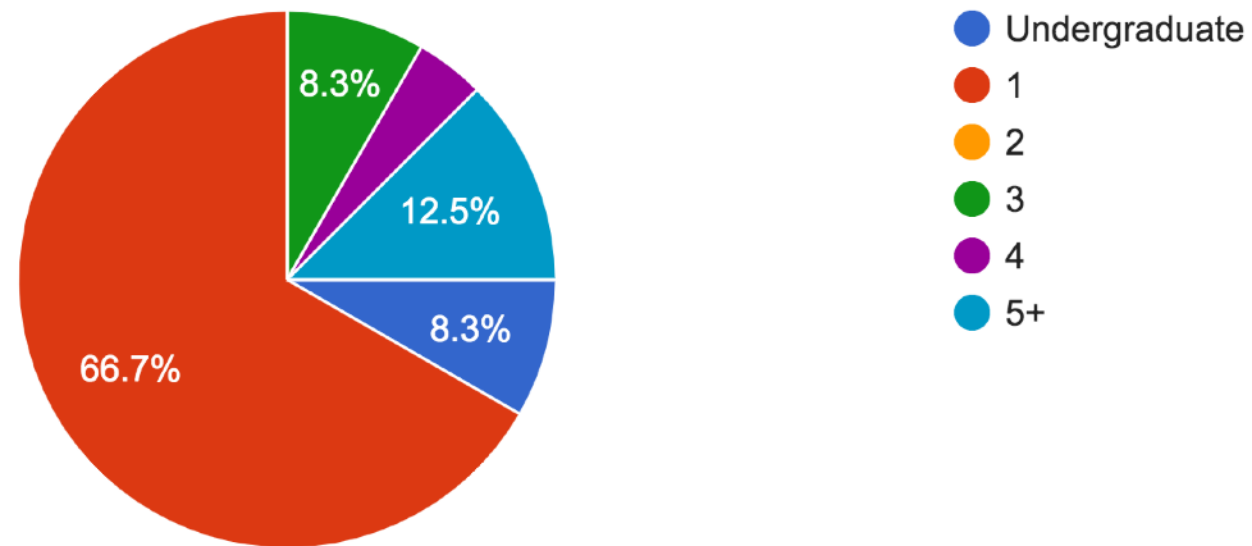
It was good. Maybe spend a few more minutes to discuss the final project

I'll talk some more about final projects on Friday

Introductory survey

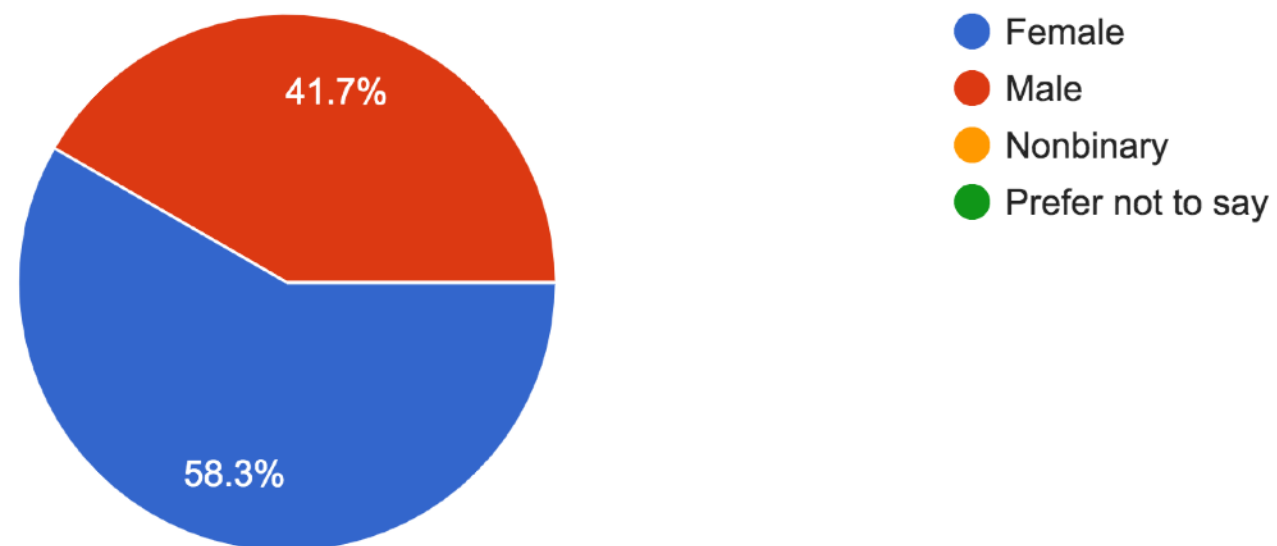
What year of graduate school are you in?

24 responses



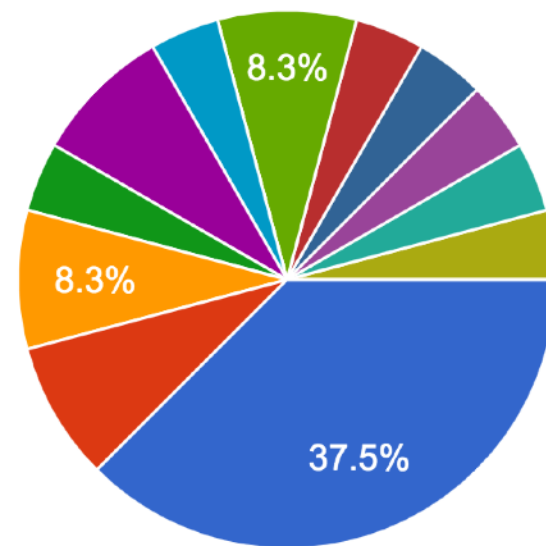
What is your gender?

24 responses



What department are you in?

24 responses

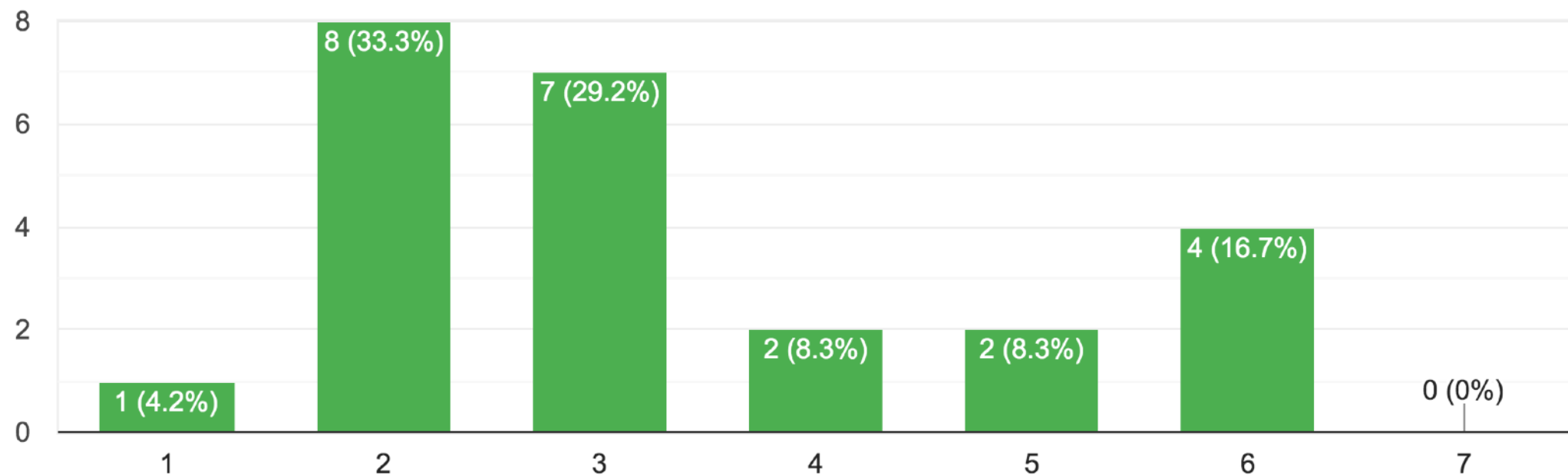


- Psychology
- Education
- GSB: Organizational Behavior
- GSB: Other
- Linguistics
- Computer Science: HCI
- Computer Science: Other
- Communication

▲ 1/2 ▼

Please rate your level of experience with computer programming

24 responses

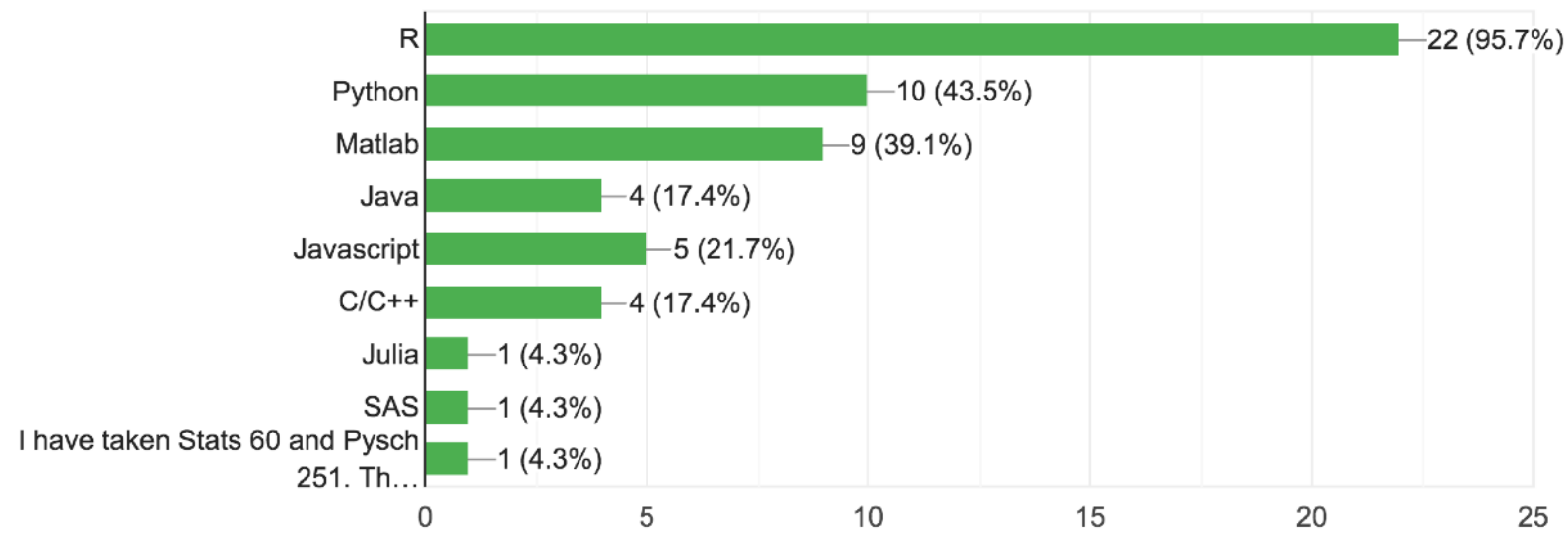


I have no experience
with programming

I'm an expert
programmer

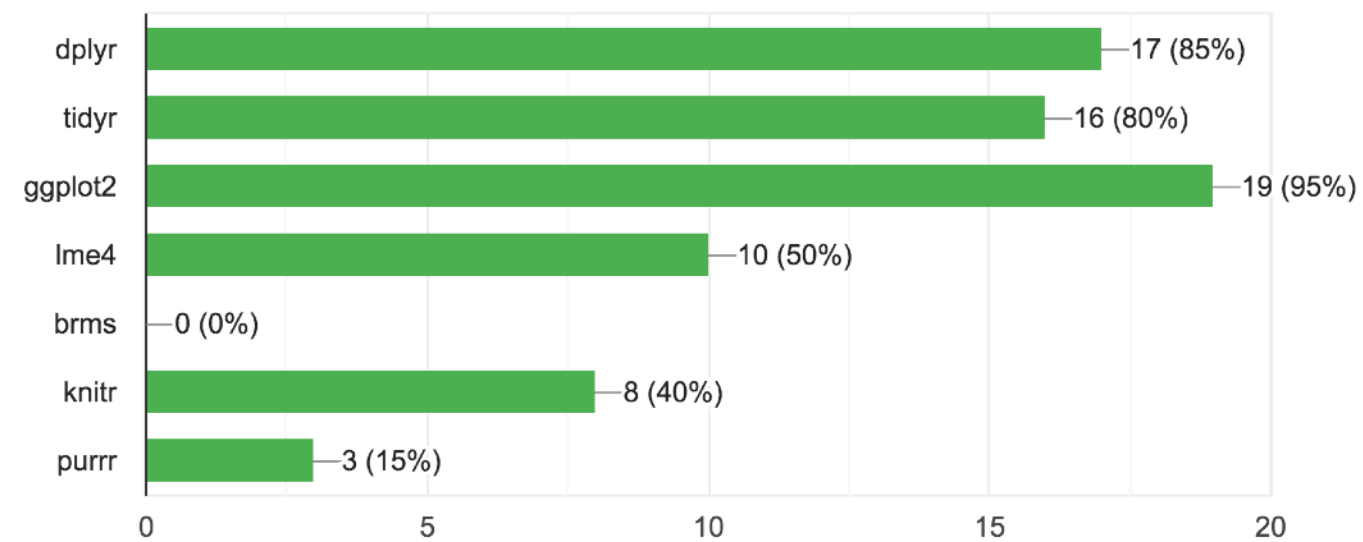
If you have programming experience, which programming languages do you have experience with?

23 responses



If you have prior R experience, which (if any) of the following libraries do you have experience with?

20 responses



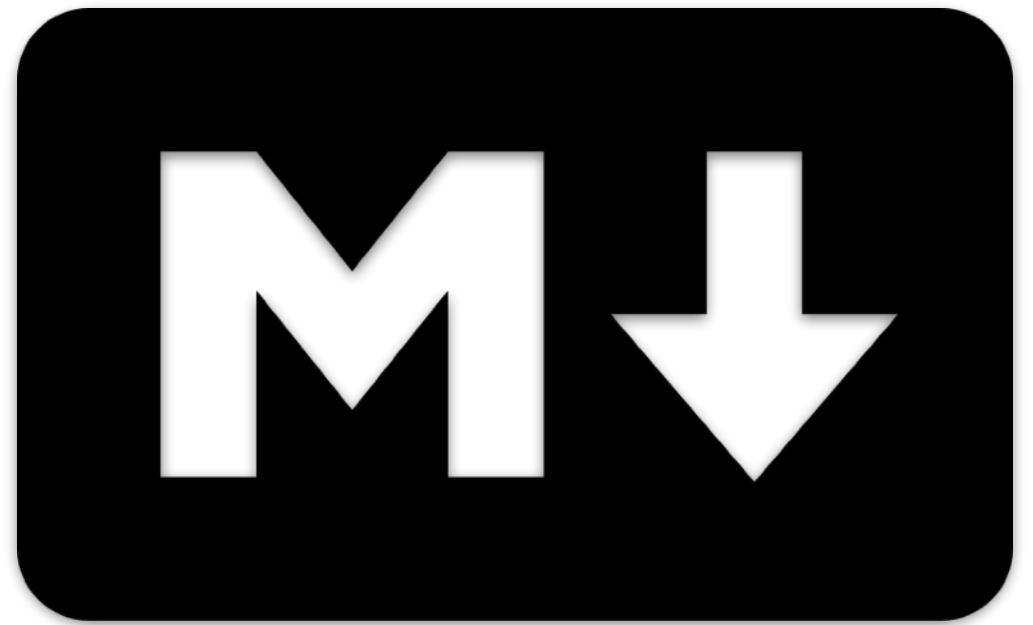
Logistics



What is RMarkdown?




+



Markdown

What is Markdown?

Syntax	Becomes
Plain text	Plain text
End a line with two spaces to start a new paragraph.	End a line with two spaces to start a new paragraph.
<code>*italics*</code> and <code>_italics_</code>	<i>italics</i> and <i>italics</i>
<code>**bold**</code> and <code>__bold__</code>	bold and bold
<code>superscript^2^</code>	^{superscript} 2
<code>~~strikethrough~~</code>	strikethrough
<code>[link](www.rstudio.com)</code>	link
<code># Header 1</code>	<h1>Header 1</h1>
<code>## Header 2</code>	<h2>Header 2</h2>
<code>### Header 3</code>	<h3>Header 3</h3>
<code>#### Header 4</code>	<h4>Header 4</h4>
<code>##### Header 5</code>	<h5>Header 5</h5>
<code>##### Header 6</code>	<h6>Header 6</h6>
<code>endash: --</code>	endash: –
<code>emdash: ---</code>	emdash: —
<code>ellipsis: ...</code>	ellipsis: ...
<code>inline equation: \$A = \pi * r^{2}\$</code>	inline equation: $A = \pi * r^2$
<code>image: </code>	image: 

check out the file `rmarkdown-reference.pdf`

What is RMarkdown?

R Markdown :: CHEAT SHEET

What is R Markdown?

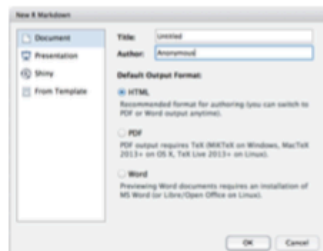


.Rmd files • An R Markdown (.Rmd) file is a record of your research. It contains the code that a scientist needs to reproduce your work along with the narration that a reader needs to understand your work.

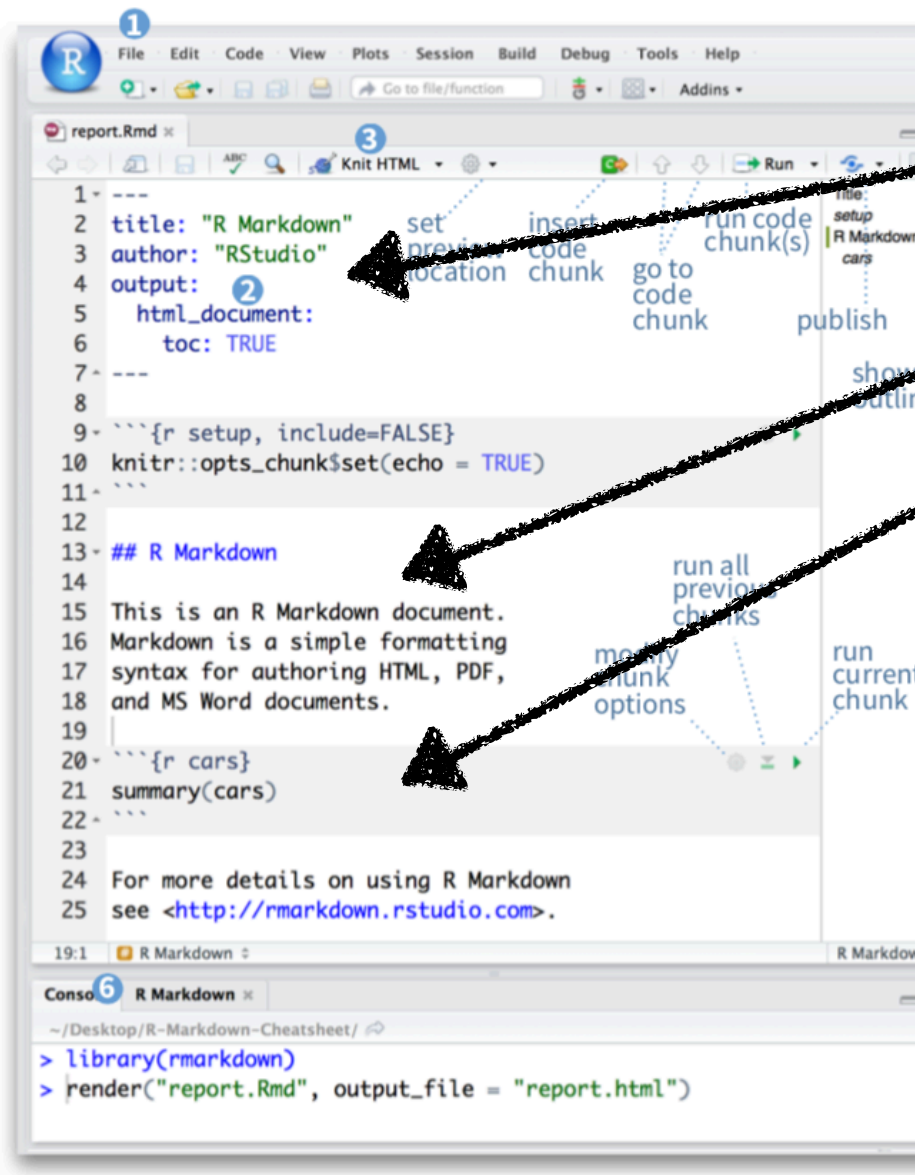
Reproducible Research • At the click of a button, or the type of a command, you can rerun the code in an R Markdown file to reproduce your work and export the results as a finished report.

Dynamic Documents • You can choose to export the finished report in a variety of formats, including html, pdf, MS Word, or RTF documents; html or pdf based slides, Notebooks, and more.

Workflow



- 1 **Open a new .Rmd file** at File ► New File ► R Markdown. Use the wizard that opens to pre-populate the file with a template
- 2 **Write document** by editing template



.rmd Structure



YAML Header

Optional section of render (e.g. pandoc) options written as key:value pairs (YAML).

At start of file

Between lines of ---

Text

Narration formatted with markdown, mixed with:

Code Chunks

Chunks of embedded code. Each chunk:

Begins with `{r}`

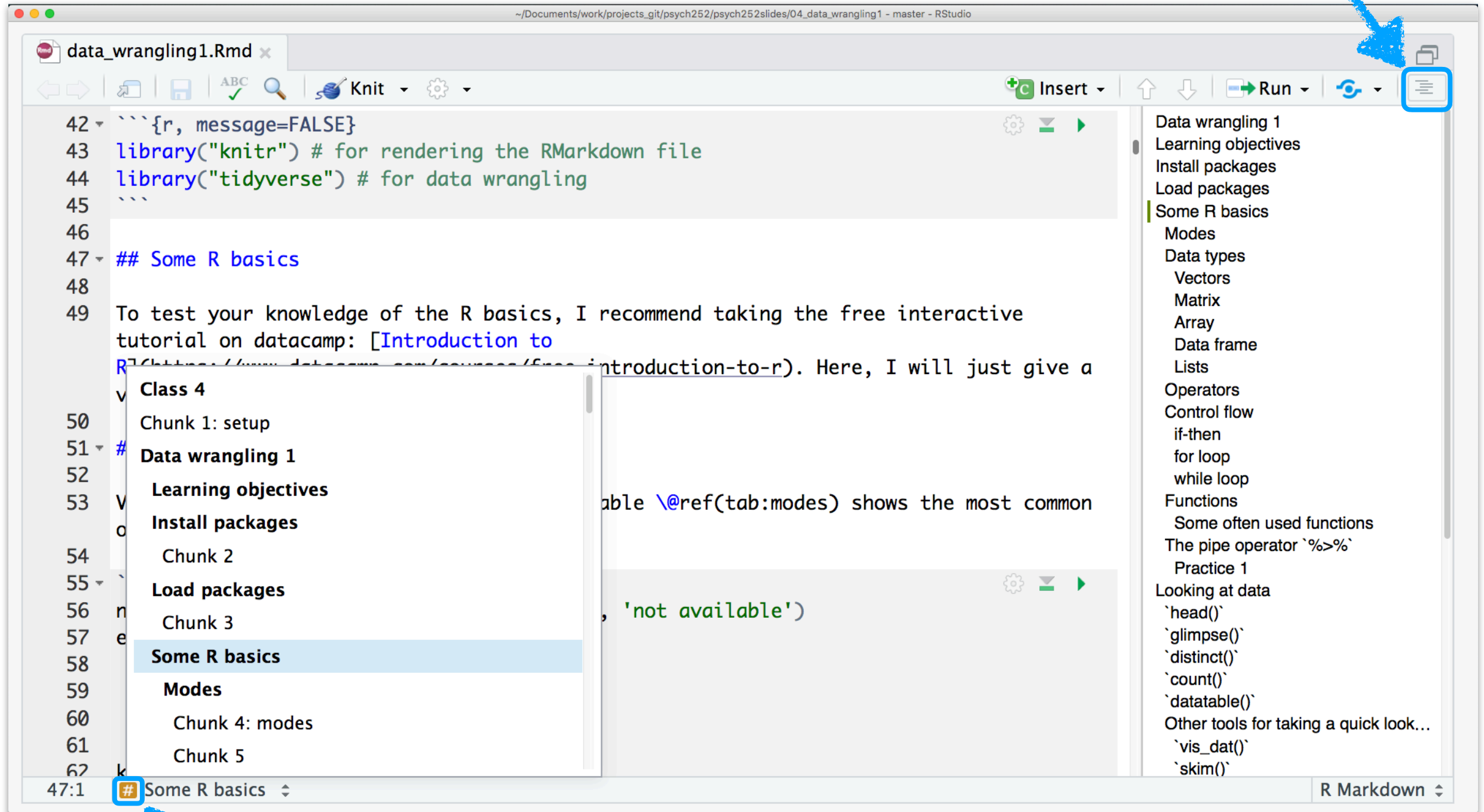
ends with `````

R Markdown will run the code and append the results to the doc. It will use the location of the .Rmd file as the **working directory**

check out the file `rmarkdown.pdf`

Follow me

Document outline
(cmd + shift + o)



The screenshot shows the RStudio interface with a file named `data_wrangling1.Rmd` open. The main editor displays R code chunks. A blue arrow points to the 'Document outline' icon in the top right toolbar. Another blue arrow points to the 'Code chunk viewer' icon in the bottom left toolbar. The document outline on the right lists the following sections:

- Data wrangling 1
- Learning objectives
- Install packages
- Load packages
- Some R basics (highlighted)
- Modes
- Data types
 - Vectors
 - Matrix
 - Array
 - Data frame
 - Lists
- Operators
- Control flow
 - if-then
 - for loop
 - while loop
- Functions
 - Some often used functions
 - The pipe operator `%>%`
 - Practice 1
- Looking at data
 - ``head()``
 - ``glimpse()``
 - ``distinct()``
 - ``count()``
 - ``datatable()``
 - Other tools for taking a quick look...
 - ``vis_dat()``
 - ``skim()``

The code chunk viewer on the left shows the following content:

```
42 {r, message=FALSE}
43 library("knitr") # for rendering the RMarkdown file
44 library("tidyverse") # for data wrangling
45
46
47 ## Some R basics
48
49 To test your knowledge of the R basics, I recommend taking the free interactive
50 tutorial on datacamp: [Introduction to
51 R](https://www.datacamp.com/courses/free-introduction-to-r). Here, I will just give a
52
53 Class 4
54
55 Chunk 1: setup
56 # Data wrangling 1
57
58 Learning objectives
59
60 Install packages
61
62 Chunk 2
63
64 Load packages
65
66 Chunk 3
67
68 Some R basics (highlighted)
69
70 Modes
71
72 Chunk 4: modes
73
74 Chunk 5
```

Code chunk viewer

Coding



blue



pink

Timers

05 : 00

Feedback

How was the pace of today's class?

much
too
slow

a little
too
slow

just
right

a little
too
fast

much
too
fast

How happy were you with today's class overall?



What did you like about today's class? What could be improved next time?