

Wednesday's class

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A report you can put on a manager's desk

structure

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# structure

- introduction
- context
- about the data
  - nyc311
  - additional data
- findings
  - nyc311
  - additional data
  - joined data
- conclusions
- appendices

# introduction

Tell what you are going to say throughout the report.

Talk about how cities are putting data online and data scientists are using this data.

## about the data

Tell about both data sets and include an extract from each.

Also tell about tidying the data here.

Also tell how you joined them here and tell what the joined data set looks like.

Show plots of both data sets and the joined data set.



# conclusions

Tell what you have told, the main points about the data

# appendices

Data dictionaries go here, as could potentially other material like the raw output of `str()`.

another structure

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## another structure

- introduction
- context
- question 1
- answer 1
- $\vdots$
- question n
- answer n
- conclusions
- appendices

advice

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words matter!

spelling = credibility

words matter!

grammar = credibility

a source on grammar

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GARNER'S  
MODERN  
AMERICAN  
USAGE

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THIRD EDITION

Bryan A. Garner

OXFORD  
UNIVERSITY PRESS  
2004



## tips on r markdown

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too wide?

use `classoption: landscape` in front matter

margins too big?

use `geometry: left=1cm,right=1cm,top=1cm,bottom=1cm` in  
frontmatter

want uniform figures?

use `fig_width: 10` and `fig_height: 8` in front matter

## code only in the .Rmd file

```
```{r setup, include=FALSE, warning=FALSE, message=FALSE}  
blabla  
```
```

## suppress package startup messages

```
suppressWarnings(suppressPackageStartupMessages(library(pander)))
```

## sizes (outside chunks)

`\normalsize, \small, \footnotesize, \scriptsize, \tiny`

## sizes (inside chunks)

```
```{r crosstabs, size='footnotesize'}  
Crosstable(blabla)  
```
```



## optional packages

- pander: package and function for prettier output
- plotly: helpful for python users
- riverplot: for sankey diagrams

## set figure width and height

```
library(knitr)  
knitr::opts_chunk$set(fig.width=12,fig.height=8)
```

... or use the same options in a specific chunk

## labels bunched?

use

```
axis.text.x=element_text(angle=45,hjust=1,size=6)
```

in theme()

want to add an external graphic?

```
use 
```

## size example

```
```{r Sankey, fig.width=25, fig.height=15}  
blabla  
```
```

## silence example

```
```{r Sankey, echo = FALSE, warning=FALSE, message=FALSE}  
blabla  
```
```

## inline calculations

We find that the data contains ``r nrow(nyc311)`` rows.

## adding extra vertical space

```
`cat("\n\n\n")`
```



# obey some rules

- budget time, set a schedule, knit early and often
- blank line before #
- space after #
- second level heading is ##
- blank line before bulleted list
- blank line after chunk

## warning:

chunk names can't contain trailing spaces or ampersands (maybe other special characters as well)

warning:

don't try to render a point for every row

**END**

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