



University  
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# A GTA's perspective

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**WORLD  
CHANGING  
GLASGOW**

THE SUNDAY TIMES  
GOOD  
UNIVERSITY  
GUIDE  
2018  
SCOTTISH  
UNIVERSITY  
OF THE YEAR



# Ideas for getting started teaching R

- Consider the audience
- Be relevant
- Foster good habits early
- Explain simply
- What can and can't you teach in a class
- Additional considerations



# Consider your audience

- Coding experience? Stats experience?
- Did they know this was coming?
- Sometimes
  - L1 = Postgrad
  - L1 < Postgrad
  - L2 > Postgrad



# Use relevant examples early

- No.1 question;

Why are we doing this?

- “Fun” ≠ Useful




- Start with relevant – end with fun

- Their own data?



# Foster good habits early

- Difference between Console/ Scripts/ R Markdown
- Save old scripts 
- Work smart not hard!
- Notes! Comment everything
- Coding conventions and consistency



# Explain all the things!

- Assignment operator? Element? Vector? Variable? Etc.



- Reading code in simple language
  - Take the abstract/ arbitrary and make it meaningful
  - What does the “sentence” mean?



# What can you do in the time you have?

• Prep → In class → Homework

• Take it and break it

What happens when I change  
this...  
OH GOD! UNDO! UNDO!!

• They can use other sources



DataCamp

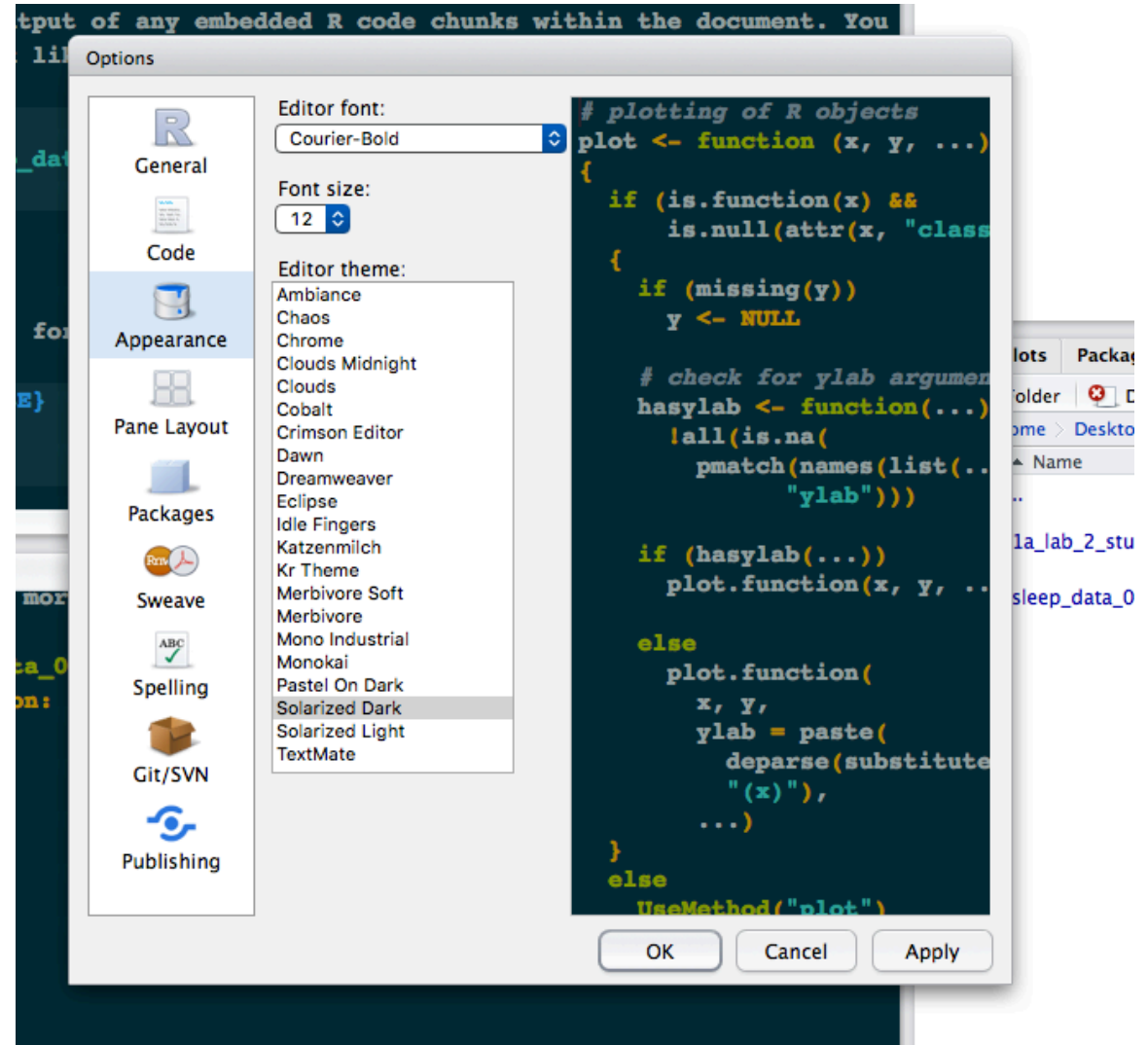


**Code School**  
a Pluralsight company

{swirl}

# Additional considerations

- Good documentation
  - especially for start up
  - Reference material
- Dyslexia etc.
  - Editor environment
  - Tidiness
  - Consistency / meaningful
  - Keyboard shortcuts
  - Functions







# 5 tips from our experience as GTAs

- Calming nerves
- Don't be an expert
- Talk through the code
- Don't touch the keyboard
- Joint problem solving





# Calming nerves

- Not just technical support with R – also reassuring anxious students
- Very new type of software/skill – can be daunting at first





# Don't be an expert

- Fine to make mistakes – let students see the whole process
- Honesty is encouraging for students:

I always make that  
same mistake in my  
code too!





# Talk through the code

I want to...

- 1) take the data in 'mydat'  
AND THEN
- 2) group it together based on 'sex'  
AND THEN
- 3) create a summary variable called 'mean.score' with the mean value of 'score' for each sex

```
myscript.R x
Source
1
2 mydat %>%
3   group_by(sex) %>%
4   summarise(mean.score = mean(score))
5
5:1 (Top Level) R Script
```





# Don't touch the keyboard

- Slower process but worth it – positive student feedback
- Sense of ownership, achievement and confidence





# Joint problem solving

- Encourage trial and error: challenge fear of doing something wrong

- Work through strategies together:

Let's see if we have a similar script we could edit

Let's look at the help documentation for this function





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