University of Sussex
Sussex Humanities Lab

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CITY UNIVERSITY LONDON

software carpentry

BRITISH LIBRARY

Library Carpentry
Week One: Basics

The Software Sustainability Institute

www.software.ac.uk

Schedule

Week 1: Some Basics

Week 2: Controlling Data (with the Shell)

Week 3: Versioning Data (with Git)

Week 4: Cleaning Data (with Open Refine)

Where to go for help

Stickers
Helpers
Sticky notes
github.com/LibraryCarpentry

Final admin

Same place, same time
Worksheets
Tea, coffee, snacks, food
Roam around
Wifi

Week 1: Some Basics

18:00-18:45 Jargon Busting
18:45-19:30 Foundations
19:30-20:15 Regular Expressions

Jargon Busting

Teams of 5 or 6
Write terms you want busting on stickies
Cluster (retaining duplicates)
Discuss and explain
Note resolved terms
Note unresolved terms
Report back

Foundations

The Computer is Stupid
Why automate
Keyboard shortcuts are your friend
Plain text formats are your friend
Structuring files and folders

Foundations

The Computer is Stupid

ERROR

Foundations

Why automate?

Borrow, borrow, borrow
There is no correct language
Professional development
Knowing some code ~ evaluating software
Making time to do fun stuff!

Andromeda Yelton, "Coding for Librarians: Learning by Example", *Library Technology Reports* 51:3 (April 2015), doi: 10.5860/ltr.51n3

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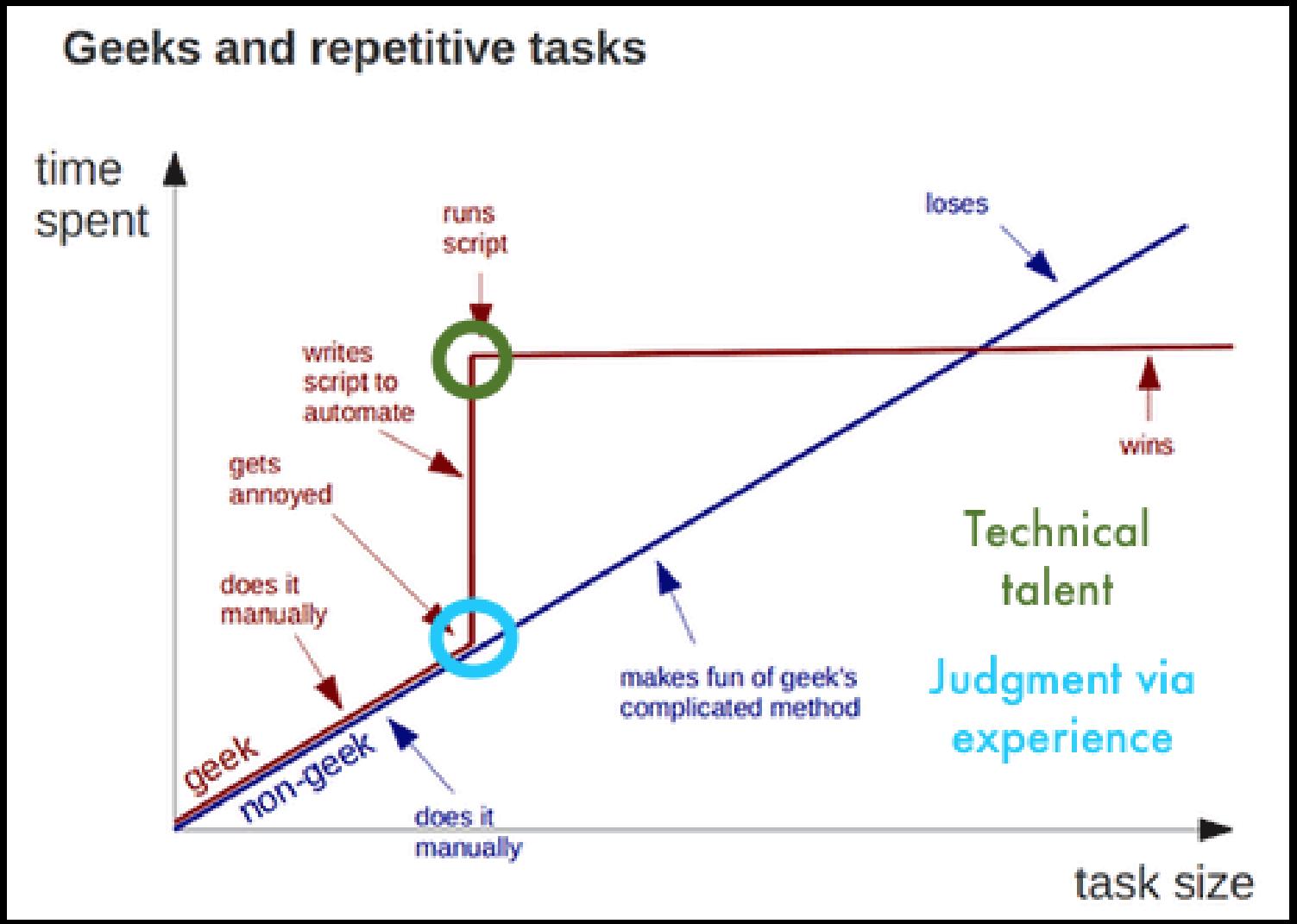
@j_w_baker

Foundations

Why automate?



Credit: Andy Kirk

Foundations

Keyboard shortcuts are your friend

Efficiency and control

Foundations

Plain text formats are your friend

Computers process them better
Platform agnostic
Display orientated files aren't your friend
Markdown

Foundations

Structuring files and folders

Consistent and predictable data structure
Semantic-data hybrid directory names
Your own system is fine
Links files and directories with names

You are the most likely person to forget what you once did!

Regular Expressions

Match on types of character

Match patterns

Capture the parts that match your pattern

Regular Expressions

organi[sz]e

organise (match)
organize (match)
reorganise (match part so will also find)
reorganize (match part so will also find)

Regular Expressions

[ABC]	matches A or B or C.
[A-Z]	matches any upper case letter.
[A-Za-z0-9]	matches any upper or lower case letter or any digit.

Regular Expressions

. matches any character at all.
\d matches any single digit.
\w matches any part of word character.
\s matches any space, tab, or newline.
\b matches a word boundary.
^ defines the start of the string.
$ defines the end of the string (starting with ^ and ending with $ will effectively find lines/cells that only contain your expression).

Regular Expressions

^[Oo]rgani.e$

Regular Expressions

* matches proceeding character any number of times including zero.

+ matches proceeding character any number of times excluding zero.

? matches the proceeding character one or zero times.

{VALUE,VALUE} matches proceeding character a defined number of times.

| simply means or.

Regular Expressions

^[Oo]rgani.e\w*

Regular Expressions

[Oo]rgani.e\w+$

Regular Expressions

^[Oo]rgani.e\w?\b

Regular Expressions

\b[Oo]rgani.e\w{2}\b

Regular Expressions

\b[Oo]rgani.e\b|\b[Oo]rgani.e\w{1}\b

Regular Expressions

Exercise

Teams of 5 or 6
Work through handout
Split into two teams and write:

- strings that need regex
- regex that need outputs

Test each other!

Next Week

Week 2: Controlling Data (with the Shell)

You will need a computer
Set-up instructions on Github
Log an issue if you have trouble

See you next week!

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