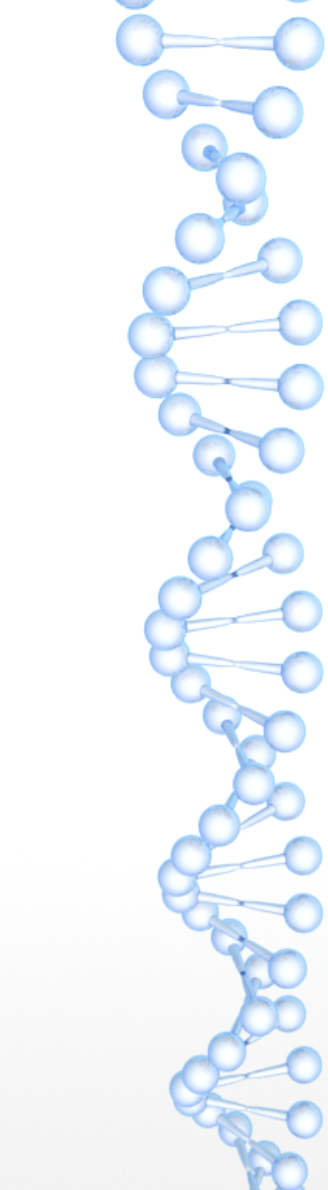


Regular Expression 101

by

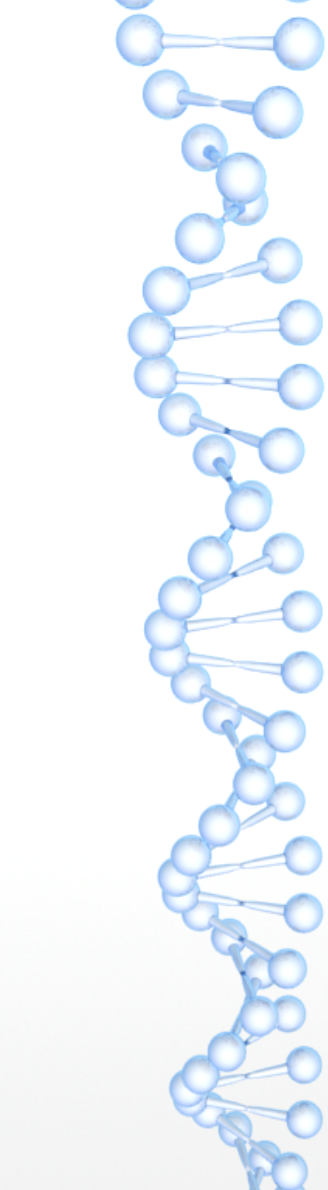
Travis Risner

Regular Expression 101

- Leader: Travis Risner
-
- Lab Partners: Chris, Jim, Joe

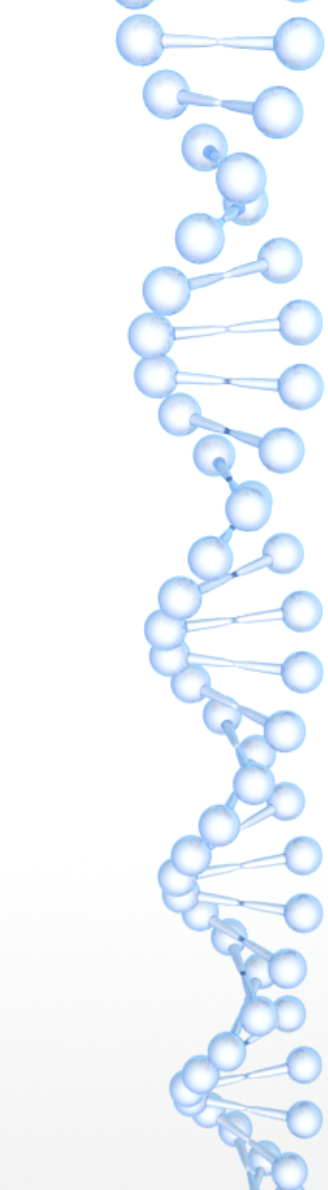
Regular Expression 101

- Lab Intent:
  - Covers basic regular expressions (RegEx) in Python
  - Focus is on RegEx syntax
- Not covered:
  - Advanced RegEx topics such as lookahead and lookbehind
  - Non-Python RegEx usage
  - Unicode, hex or octal handling



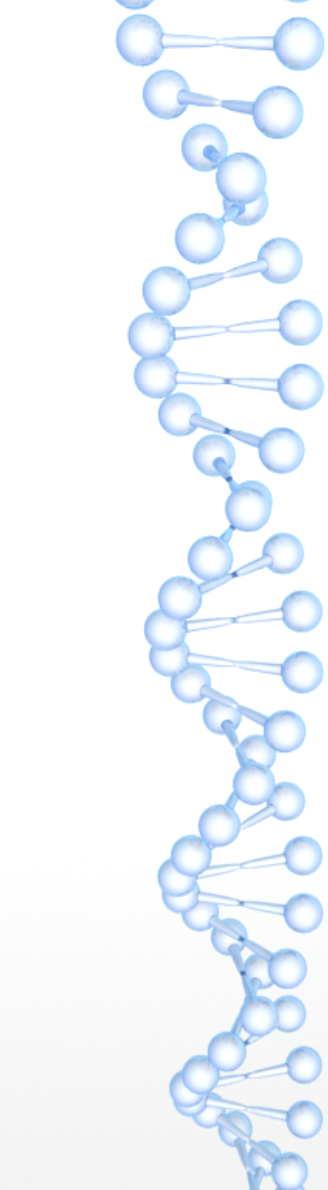
Regular Expression 101

- Lab format:
  - Short lecture at the beginning and at the end
  - Download lab materials
  - Setup your workstation to use Jupyter
    - or method of your choice
  - Work through about 20 exercises
  - A ten minute break mid-session
    - If anyone comes back, we will resume



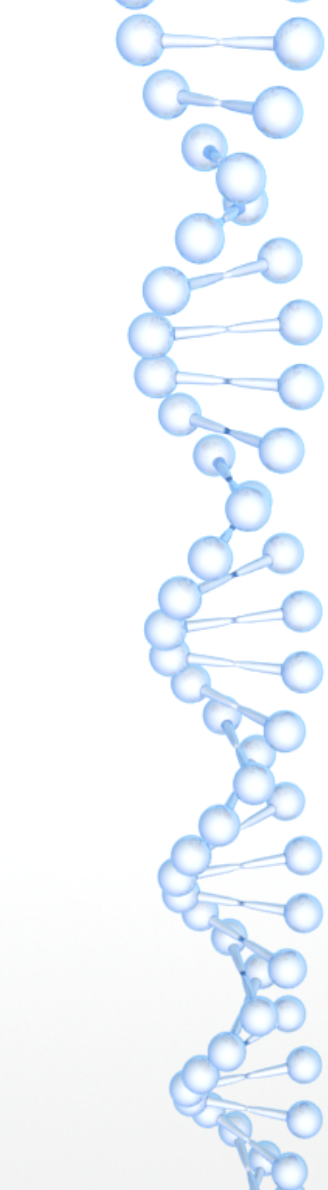
Regular Expression 101

- Expectations:
  - A workstation (e.g. laptop) with:
    - Reasonably current OS with Wireless capability
    - Browser to use Jupyter or IDE of your choice
    - Rodent of your choice
  - Some familiarity with Python development
  - Willingness to work with Python 3.3 or newer
- Questions?



Regular Expression 101

- What is RegEx?
  - A method of searching or scanning text based on the characteristics of the text.
  - Examples
- Why use RegEx?
- When to use RegEx.
- When not to use RegEx.
- RegEx is best suited for some tasks, but not others.

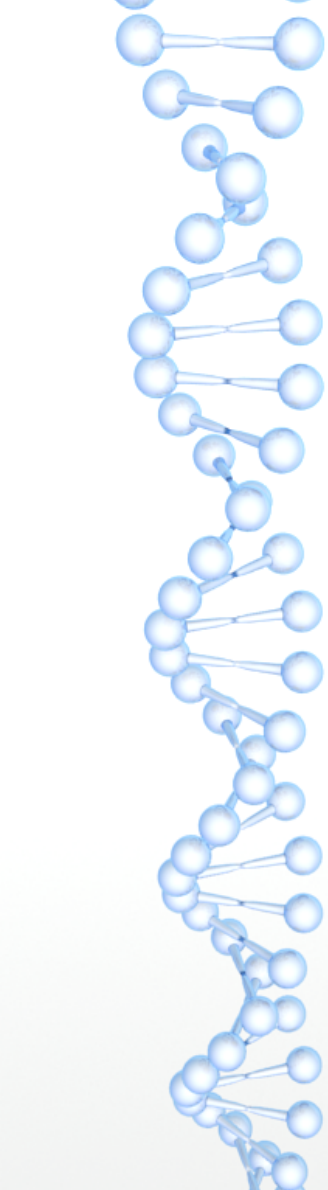


Regular Expression 101

- Setup details for lab
  - Wireless for Ohio Union
-

Regular Expression 101

- Material source
  - Go to GitHub:
  - https://github.com/deeppunster/RegEx101
  - Click on “Clone or Download” to download
  - Unpack the zip file
  - Go to: https://try.jupyter.org.
  - Click on Upload.
  - Choose RegEx 101 without answers.ipynb
  - Click on Upload
  - Click on RegEx 101 without answers



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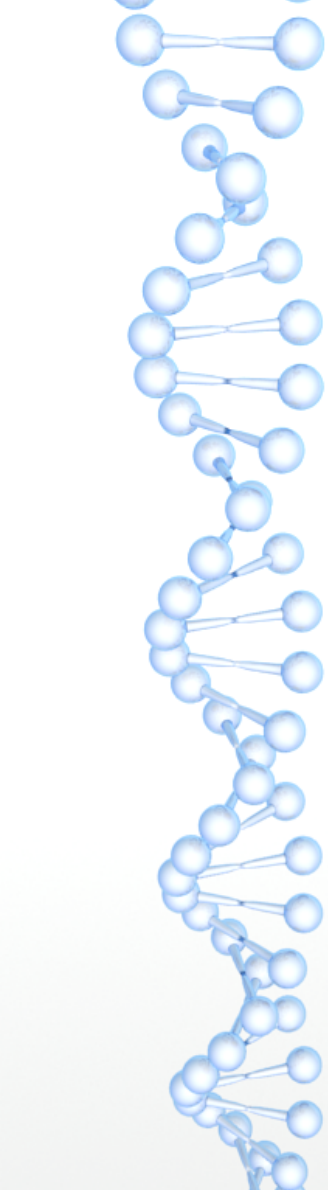
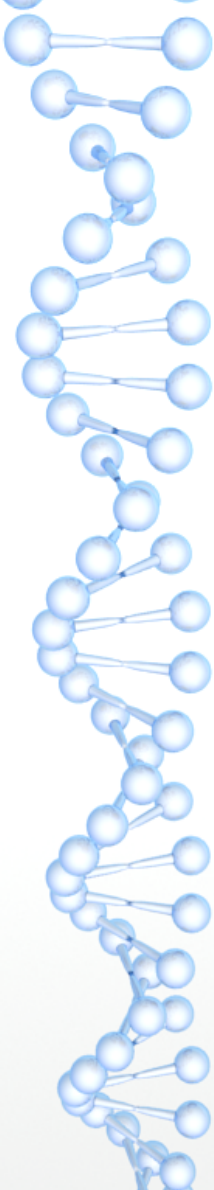
- Go to first exercise



Regular Expression 101

- Break!

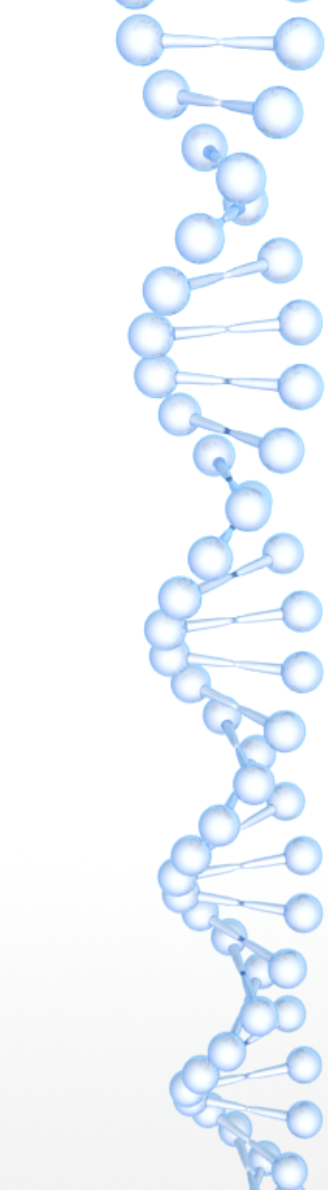


Regular Expression 101

Advanced Example

Regular Expression 101

- Recap
  - From re import <needed functions>.
  - Always use raw strings (r’’’ … ‘’’) for RegEx.
  - If you need to use the same RegEx repeatedly, compile it.
  - Use VERBOSE mode unless RegEx is very simple.
  -



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- Recap (continued)
  - Use RegEx when it makes sense.
  - First make sure it is correct before attempting to make it efficient
  - Don’t make the next person hate you for using RegEx – it might even be you!

Regular Expression 101

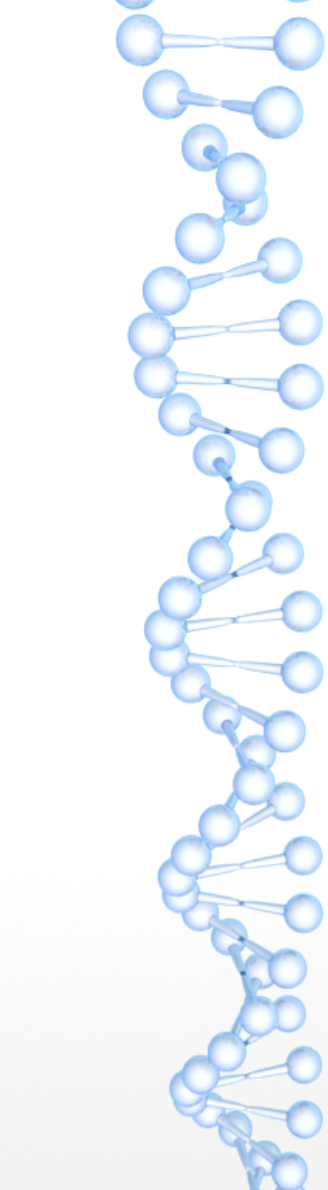
References:

Python documentation at https://docs.python.org/3/library/re.html

Tutorial: http://www.regular-expressions.info/python.html

Python RegEx Cheatsheet:
https://www.debuggex.com/cheatsheet/regex/python

Interactive tutorial: http://www.learnpython.org/en/Regular_Expressions



Regular Expression 101

- Resources – Books:
- Mastering Regular Expressions by Jeffery Friedl
- Regular Expressions Pocket Reference by Tony Stubblebein
- Regular Expressions Cookbook by Jan Goyvaerts and Steven Leviathan
- Python Cookbook (a few recipes) by David Beasley and Brian Jones
- Automate the Boring Stuff with Python by Al Sweigart

Regular Expression 101

RegEx Testers

https://www.debuggex.com/ -

Python, Javascript, PCRE

http://www.pyregex.com/

http://python-regex.com/ - Python

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RegEx Testers (continued)

http://www.regexr.com/ - Unknown

https://addons.mozilla.org/en-US/firefox/addon/rext/

(Firefox Addon, uses Java)

Regular Expression 101

RegEx Testers (continued)

https://regex101.com/ -

Python, Javascript, PCRE (PHP)

http://www.regexplanet.com/

Python, GO, Haskell, Java, Javascript, .net, Perl, PHP, Ruby. Tcl, XRegExp