

# Maptime MSP

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Python

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# Python...the Beginning/er

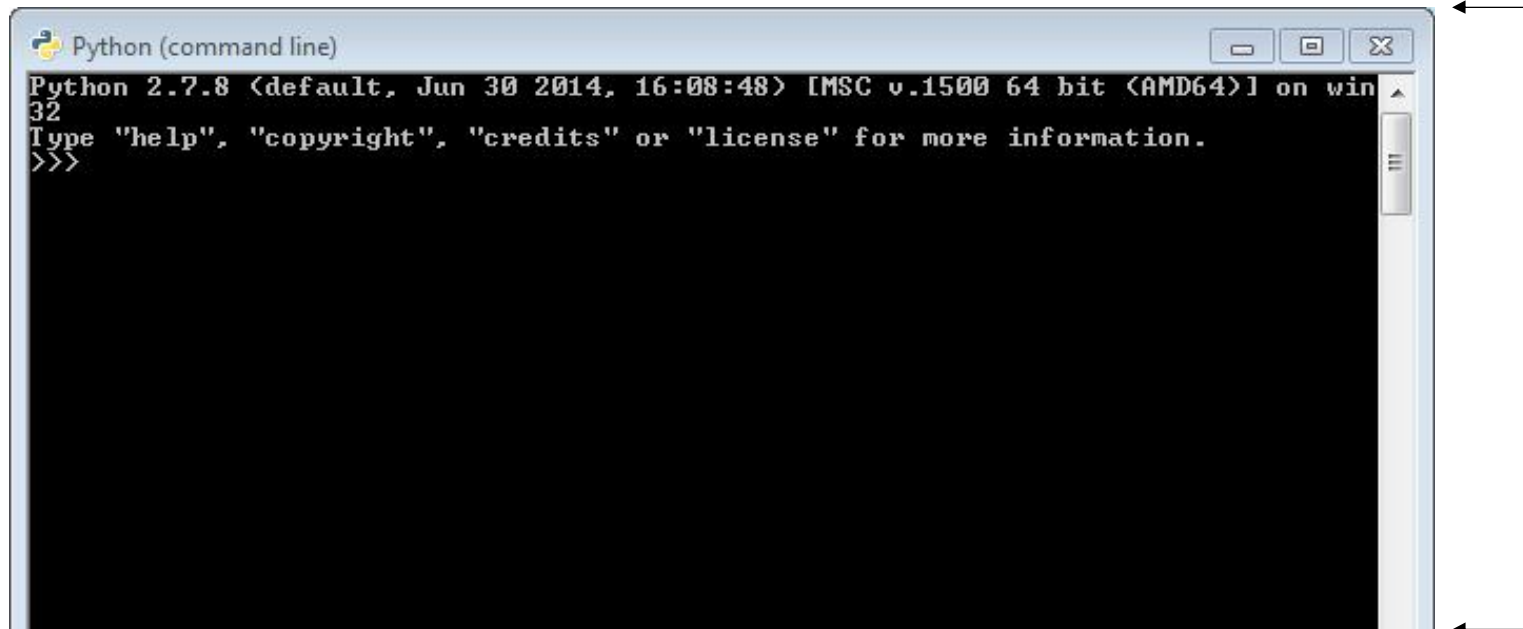
Rachel Koch – Python user since October 2015

# Python...the Beginning

- Definitions
- Resources
- Takeaways
- Roadblocks

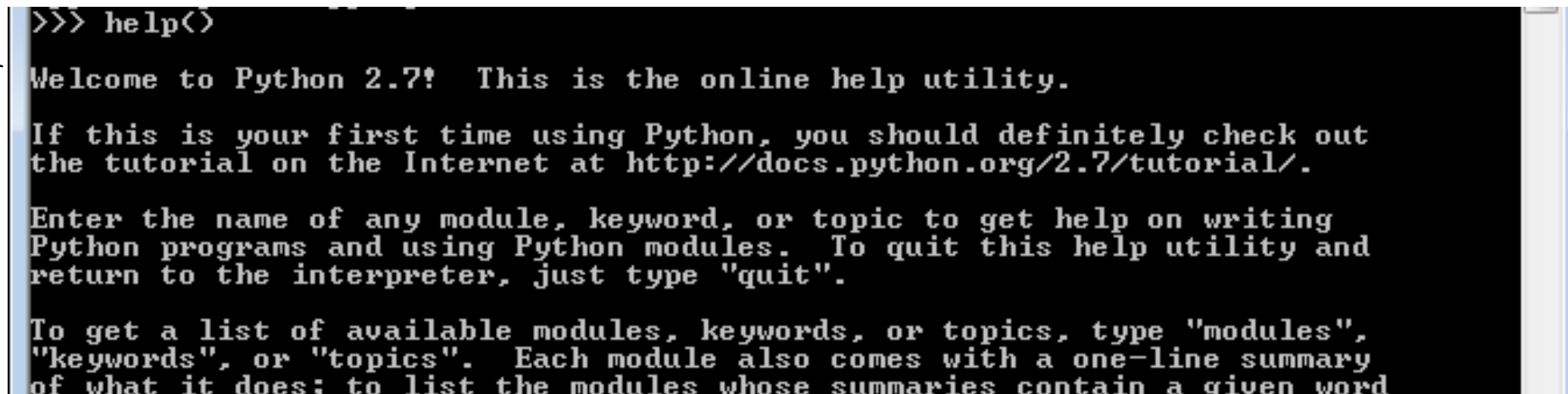
# Getting Started – the basics

- Console...Command Prompt...Terminal...Interpreter...Shell
- Text Editor
- Expressions and Statements
  - $1 + 2$
  - $x = 1 + 2$
- Variables and Data Types
  - $x = 37$        $x = 37.0$        $x = "37"$
- Functions
- Libraries/Modules

A screenshot of a Windows command prompt window titled "Python (command line)". The window has a standard Windows title bar with minimize, maximize, and close buttons. The text inside the window reads: "Python 2.7.8 (default, Jun 30 2014, 16:08:48) [MSC v.1500 64 bit (AMD64)] on win32", "Type 'help', 'copyright', 'credits' or 'license' for more information.", and ">>>".

```
Python (command line)
Python 2.7.8 (default, Jun 30 2014, 16:08:48) [MSC v.1500 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

console/  
command  
prompt/  
terminal

A screenshot of the Python help utility running in a command prompt. The text shows the command ">>> help()", followed by a welcome message and instructions on how to use the help utility, including how to quit or get a list of modules.

```
>>> help()
Welcome to Python 2.7! This is the online help utility.

If this is your first time using Python, you should definitely check out
the tutorial on the Internet at http://docs.python.org/2.7/tutorial/.

Enter the name of any module, keyword, or topic to get help on writing
Python programs and using Python modules. To quit this help utility and
return to the interpreter, just type "quit".

To get a list of available modules, keywords, or topics, type "modules",
"keywords", or "topics". Each module also comes with a one-line summary
of what it does; to list the modules whose summaries contain a given word
```

→  
interpreter  
session/  
shell

# Getting Started – resources

- Online Tutorials
  - Codecademy: [www.codecademy.com/learn/python](http://www.codecademy.com/learn/python)
  - Learn Python the Hard Way: [learnpythonthehardway.org/book/](http://learnpythonthehardway.org/book/)
  - Udacity: [www.udacity.com/course/programming-foundations-with-python--ud036](http://www.udacity.com/course/programming-foundations-with-python--ud036)
- Books
  - Python Scripting for ArcGIS, Paul A. Zandbergen, Esri Press
- Other
  - Random scripts from friends, colleagues, forums

# Getting Started – resources

- Online Tutorials not tried but in our queue
  - Google's Python Class: [developers.google.com/edu/python/?csw=1](https://developers.google.com/edu/python/?csw=1)
  - Grok Learning: [groklearning.com/courses/](https://groklearning.com/courses/)
  - edX: [www.edx.org/course/introduction-computer-science-harvardx-cs50x#](https://www.edx.org/course/introduction-computer-science-harvardx-cs50x#)
  - Penn State, Department of Geography: [www.e-education.psu.edu/geog485/node/17](http://www.e-education.psu.edu/geog485/node/17)
  - Loyola University Chicago, Computer Science Department: [anh.cs.luc.edu/handsonPythonTutorial/](http://anh.cs.luc.edu/handsonPythonTutorial/)

# Takeaways

- Understand your learning style
- Get out of your comfort zone
- Pseudocode
- Regular practice
- Stay positive
- Reach out



# Roadblocks

- Turtle...what is it good for?

- Imposter Syndrome

"It is always pleasant to be right, but it is generally a much more useful thing to be wrong."

- Sir William R. Gowers, neurologist

Forward 20 steps! Now turn right, by 45 degrees! Now go back 40 steps! Turn right, 90 degrees!



# Questions & Discussion



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What did the function say at the end of the night?  
Call me!

There are 10 types of people in the world:  
Those who understand binary, and those who don't