



## PYTHON: HALF-DAY WORKSHOP

Lesson 1: Up and running with  
Python + Jupyter

Lesson 2: Introduction to Python  
programming

Lesson 3: Working with lists

Lesson 4: Working with functions  
and methods

Lesson 5: Working with modules

Lesson 6: Capstone

## Learning Objectives

- Student can create, navigate and download Jupyter notebooks for Python
- Student can assign variables and perform basic operations on variables
- Student can create, inspect and modify lists
- Student can pass lists into functions and methods
- Student can install, explore and implement elements of a module
- Student can create and analyze lists using Python modules, methods and functions

Lesson plan developed by George Mount. For more resources like this, visit [stringfestanalytics.com](http://stringfestanalytics.com)

### Lesson 1: Up and running with Python + Jupyter

Objective: Student can create, navigate and download Jupyter notebooks for Python

Description:

- Why Python for data analysis
- A tour of Jupyter notebooks
- Assigning the first variable

Exercises: Drills

Assets needed: None

Time: 30 minutes

### Lesson 2: Introduction to Python programming

Objective: Student can assign variables and perform basic operations on variables

Description:

- Assigning, printing and modifying variables
- Operating arithmetically on variables
- Checking a variable's type

Exercises: Drills

Assets needed: None

Time: 45 minutes

### Lesson 3: Working with lists

Objective: Student can create, inspect and modify lists

Description:

- Variable types and lists
- Creating lists
- Slicing and subsetting lists
- Manipulating lists

Exercises: Drills

Assets needed: None

Time: 45 minutes

### Lesson 4: Working with functions and methods

Objective: Student can pass lists into functions and methods

Description:

- Numeric functions and methods
- String functions and methods
- Method chaining
- Manipulating lists with functions and methods

Exercises: Drills

Assets needed: None

Time: 40 minutes

### Lesson 5: Working with modules

Objective: Student can install, explore and implement elements of a module

Description:

- Installing a module
- Exploring features of a module
- Importing modules and elements of modules
- Aliasing modules

Exercises: Drills

Assets needed: None

Time: 40 minutes

### Lesson 6: Capstone

Objective: Student can create and analyze lists using Python modules, methods and functions

Exercises: Extended drill

Assets needed: None

Time: 30 minutes



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