



Methods and Functions



Methods



Deep Learning

- Built-in objects in Python have a variety of methods you can use!
- Let's explore in a bit more detail how to find methods and how to get information about them.



Functions



Deep Learning

- Creating clean repeatable code is a key part of becoming an effective programmer.
- **Functions** allow us to create blocks of code that can be easily executed many times, without needing to constantly rewrite the entire block of code.



Deep Learning

```
def name_of_function():  
    """  
    Docstring explains function.  
    """  
    print("Hello")
```

```
>> name_of_function()  
>> Hello
```



Deep Learning

```
def name_of_function(name):  
    """  
    Docstring explains function.  
    """  
    print("Hello "+name)
```

```
>> name_of_function("Jose")  
>> Hello Jose
```



Deep Learning

- Typically we use the **return** keyword to send back the result of the function, instead of just printing it out.
- **return** allows us to assign the output of the function to a new variable.



Deep Learning

```
def add_function(num1,num2):  
    return num1+num2
```

```
>> result = add_function(1,2)
```

```
>>
```

```
>> print(result)
```

```
>> 3
```



Deep Learning

- Let's explore more examples of using functions!



Function Practice Problems



Deep Learning

- Learning functions increases your Python skills exponentially.
- This also means that the difficulties of problems you can solve also increases drastically.



Deep Learning

- Let's get some practice with converting problem statements into Python code.
- We'll go through a series of Function Practice Exercises.
- After this lecture we will go through the solutions.



Deep Learning

- There are two options for this material:
 - Try out the exercises yourself, then go through the solutions.
 - Treat the solutions as a code-along lecture for more guided practice.



Function Practice Problems Solutions Level 2



Lambda Expressions

Map and Filter



***args and **kwargs**