

NLP

1. Introduction to Python

- History of Python
- Why to learn python
- How is Python Different?
- Installing Python

2. Python Interpreter

- Using the interpreter
- Integrated Development Environments (IDE)
- How to run Python programs?

3. Basics of Python

- Variable
- Keywords
- Statements & Comments
- Indentation
- Data types
- Static Typing vs Dynamic Typing
- Input and output

4. Operators

- Arithmetic operator
- Relational Operator
- Assignment Operator
- Logical operator Bitwise operator
- Membership Operator
- Identity Operator

5. Control Flow

- If statement
- If - else
- If – elif -else
- Nested if - else
- while loop
- for – in loop
- Nested loop
- Loop with else
- Pass statement
- Break and continue

6. Functions

- Function Basics
- Defining function
- function call
- Return statement
- Function parameters

- Call by value or call by reference
- local and global variable
- Recursion, Anonymous (lambda) function

7. Modules

- Defining module
- How to create module
- Importing module
- Dir()
- Module search path
- Reloading a module
- Sys module
- Os module
- namespace

8. Package

- Defining package
- How to create package
- Importing package
- Installing third party packages

9. Numeric types

- Numeric type basics
- Numbers
- Hexadecimal, Octal and Binary Notation
- Complex Numbers
- Type casting Numeric Functions
- Random number generation

10. String

- Defining a string
- Different ways to create string
- Accessing elements of string
- Escape sequence
- Raw string
- String methods
- String formatting Expressions

11. List

- Defining a list
- Creating list
- Accessing list elements of list
- Deleting list
- List methods
- Functions used with list
- List comprehension
- Implementation of stack and queue using list
- Use of Zip ()
- Matrix operations using list

12. Tuple Defining a tuple

- Creating a tuple

- Accessing elements of tuple
- Immutability
- List vs tuples
- Tuple Methods
- Functions used with tuple
- Advantage of Tuple
- 13. Dictionary
- Defining a dictionary
- Creating a dictionary
- Accessing elements of dictionary
- Deleting a dictionary
- Dictionary methods
- Dictionary Comprehension

14. Set

- Defining a set
- Creating set
- Set operations
- Set methods
- Set comprehension

15. Files

- Defining a file
- Types of fileFile operations
- Opening a File
- Closing file
- File modes
- File attributes
- Writing to file
- Reading from file
- Appending to file
- File positions
- Binary file
- Pickle module

16. Exception Handling

- Defining an exception?
- Default exception handler
- Exception handling techniques
- Detecting Exception (try)
- Catching exceptions (catch)
- Catching multiple exceptions
- Raising exception (raise)
- Finally block
- User defined exceptions

17. Object Oriented Programming

- Oop concepts Defining a class
- Creating object
- Method vs function
- Calling methods
- Instance attribute vs class attribute

- Instance method vs class method
- Private attribute and method
- Static method
- Method Overloading
- Constructor
- List of objects
- Inheritance
- Method overriding
- Operator overloading
- Abstract method
- Abstract class

18.NLP Pipeline

- Tokenization
- What is Token?
- Regular Expressions
- Applications of Regex
- Stemming
- Lemmatization

19.Regex for Tokenization

- Tagger
- Tagged Corpus
- The Default Tagger
- Regexp Tagger
- Unigram Tagger
- Ngram Tagger
- POS Tagging Information Extraction Architecture
- Chunking Overview
- Chunking in Coding

Exercise: Named Entity Recognition

Chinking

Stanford NLP API

Chunking and Chinking

Conclusion

More NLP Tutorials