



Academic Year 2017-18

Course name: - Natural Language Processing

Duration: - 10th July 2017 to 14th July 2017

Venue: - VIVA Institute of Technology

Co-ordinator: - Prof. Pallavi Raut

Enrolled students: - 69

Course Objective:-

1. To teach students the leading trends and systems in natural language processing.
2. To understand the algorithms available for the processing of linguistic information and computational properties of natural languages.
3. To enable students to be capable to describe the application based on natural language processing and to show the points of syntactic, semantic and pragmatic processing.
4. To develop systems for various NLP problems with moderate complexity.
5. To learn various strategies for NLP system evaluation and error analysis.

Course Outcomes: -

After successful completion of the course, the students are able to

1. Understand approaches to syntax and semantics in NLP.
2. Understand approaches to discourse, generation, dialogue and summarization within NLP.
3. Demonstrate understanding of the relationship between NLP and statistics & machine learning.
4. Develop systems for various NLP problems with moderate complexity
5. Evaluate NLP systems, identify shortcomings and suggest solutions for these shortcomings

Course Schedule: -

| Days | Morning Session (9 am to 12 pm) | Afternoon Session (1 pm to 4 pm) |
|------|---|---|
| 1 | Introduction & Syllabus What is Natural Language Processing? | NLTK, Python 3 and the Jupyter Notebook Introduction to HPC |
| 2 | Regular Expressions and Automata, Finite State Transducers and Morphology | Probabilistic models of spelling, N-grams |
| 3 | Tokenization, N-grams and Scriptio continua | Stemming and Lemmatization, Synsets and Hypernyms |

| | | |
|---|--------------------------------|---|
| 4 | POS Tagging and Stopwords | Text “Features” and TF-IDF Classification |
| 5 | Named Entity Recognition (NER) | Quiz |

Report:-

Computer engg. department of VIVA Institute of Technology conducted a course on “Natural Language Processing” for Last year students. Total 69 students had been enrolled for this course.

This course was conducted by Prof. Pallavi Raut in order to provide knowledge of Natural Language Processing. This course is intended as a theoretical and methodological introduction to a the most widely used and effective current techniques, strategies and toolkits for natural language processing, with a primary focus on those available in the Python programming language. This was 30 hrs. certificate course.

During the course students learned basic of Natural Language Processing . Also students learned all concepts of Natural Language Processing like Regular Expressions and Automata, Finite State Transducers and Morphology and so on. Students practiced of all things concepts in the exercise session. All doubts and errors during programming were solved by the coordinator.

Students enjoyed the course and completed it successfully.

CO-PO Mapping: -

| Course Outcome | Program Outcome | | | | | | | | | | | |
|----------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
| CO 1 | 3 | - | - | - | - | - | - | - | - | - | - | - |
| CO2 | - | 2 | - | - | - | - | - | - | - | - | - | - |
| CO3 | - | - | 3 | 1 | - | - | - | - | - | - | - | - |
| CO4 | - | - | 3 | - | - | - | - | - | - | - | - | - |
| CO 5 | - | - | - | 3 | - | - | - | - | - | - | - | - |



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