

## Short Term Course on Recent Advancements in Natural Language Processing and Understanding (RANLPU 2020)

### Objectives of the course:

This course aims to provide learners an understanding of leading trends and systems in natural language processing and understanding. Text is one of the dominant sources of information across the world. Text analytics plays an important role in discovering patterns and information from textual data. The techniques for text analytics involve complex algorithms from natural language processing and machine learning. It will cover major techniques for mining and analyzing text data to discover interesting patterns, extract useful knowledge, and support decision making. The techniques will include Sentiment Analysis, Text Classification, Summarization, Word Embedding, Sarcasm Detection and many more. The objective of this course is to make participants understand the concepts of morphology, syntax, semantics and pragmatics of the language and teach them to recognize the significance of pragmatics of natural language understanding. The objective of the course work is also to provide the theoretical fundamentals coupled with practical knowledge of pattern recognition. The hands-on training session will be conducted using Python. At the end of the session, learners will be able to describe the application based on natural language processing and to show the points of syntactic, semantic and pragmatic processing.

### Resource Person

Dr. Asif Ekbal, CSE, IIT Patna

Dr. Sriparna Saha, CSE, IIT Patna

Dr. Jyoti Prakash Singh, CSE, NIT Patna

Dr. Manish Shrivastava, CSE, IIIT Hyderabad

Dr. Atul Gupta, CSE, IIITDM Jabalpur

Dr. Ayan Seal, CSE, IIITDM Jabalpur

## Course contents

- Language Modelling
- Machine Learning Algorithms
- Text Classification
- Text Processing with NLTK
- Natural Language Syntax and Parsing and CYK Algorithm
- Sentiment Analysis
- Word Embedding
- Text Processing with CNN
- Text Processing using RNN
- Attention Model
- Text Clustering
- Embedding Techniques and CNN
- Dialog Systems
- Chat-bot development
- Sarcasm Detection
- Summarization Systems

### Course Coordinators

Dr. Ayan Seal / Dr. Atul Gupta

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## Application Form

Name of the Applicant (first, last): .....

Gender: .....

Designation: .....

Name and Postal Address of the Organization /  
Institute/college:  
.....  
.....

City/town: .....

Email id: .....

Contact Number: .....

Do you need accommodation? (Yes/No) .....

Transfer details

Account No.: ..... Date .....  
Issuing Bank ..... IFSC Code .....

**Signature of the Applicant**

### Sponsorship

Prof./Dr./Mr./Mrs./Miss .....  
..... is an employee of our  
institute and his/her application is hereby sponsored. The  
applicant will be permitted to attend the Short Term Course on  
"RANLPU 2020" at PDPM IIITDM Jabalpur during March 18-22,  
2020, if selected.

Date:

Signature of Head of Institution/  
Sponsoring Authority Designation:

Official Seal:

