Vishnu Waman Thakur Charitable Trust's
VIVA Institute of Technology
Approved by AICTE, New Delhi, DTE, Government of Maharashtra
And Affiliated to University of Mumbai

ELECTRONICS AND TELECOMMUNICATION DEPARTMENT

Topic Name: **Workshop on Natural Language processing for Research and Application**

Name of the Guest Speaker: **Dr. Harshali Patil, Associate Professor**
Mr Ankit Kumar, Application Engineer for MathWorks

Name of the Company : **Somaiya University**
Design Tech Pvt Ltd (Pune)

Date: **25th and 26th July 2024**

Time: **10:00 am to 4:00pm**

Programme Summary:

On 25th July 2024 the department of ELECTRONICS AND TELECOMMUNICATION ENGINEERING had organised a 2-day workshop on "Natural Language processing for Research and Application". On day one speaker Dr. Harshali Patil madam started the session online on Google meet by introducing the basics of data analytics in google colab. Day two was in offline mode were Mr. Ankit kumar sir had hand-on session. The workshop was conducted over a period of 2 days, with each day covering specific topics related to natural language processing. The content was structured as follows:

Day 1:

Introduction to Data Analytics using Google Colab

Data Pre-processing: Techniques for data cleaning, feature engineering, and data transformation.

Linear Regression: Theory and hands-on implementation of linear regression for predictive modeling.

Logistic Regression: Application of logistic regression for binary classification problems.

Day 2:

Introduction to NLP and Text Analysis with MATLAB
- o Definition and importance of NLP and Text Analysis
- o Overview of Text Analytics Toolbox in MATLAB
- o Try Text Analytics in 10 Lines of Code
- o Key NLP concepts: Tokenization, stemming, lemmatization, part-of-speech tagging, etc.

Text Pre-processing
- o Importing text data in MATLAB
- o Text cleaning: Removing punctuation, stop words, and special characters
- o Tokenization, stemming, and lemmatization using MATLAB functions

Data Visualization for Text Analysis Results
- o Creating visualizations for text analysis data using MATLAB functions (bar charts, word clouds)

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The Workshop on "Natural Language processing for Research and Application" organized was a resounding success, achieving its intended objectives of introducing participants to the world of google colab and MATLAB. The content was well-structured, and the combination of lectures, hands-on exercises, case studies, and group projects ensured a comprehensive learning experience for all attendees.

Report prepared by Bhavik Patil

Photos: