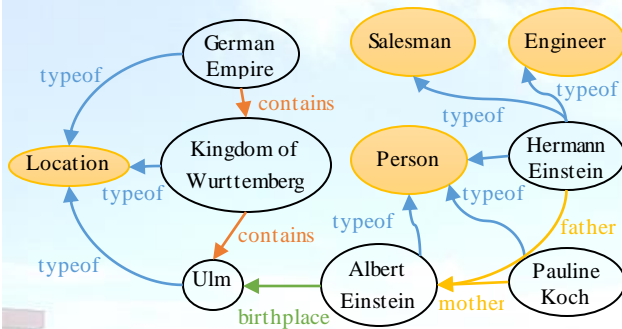


TEQIP-III Sponsored Short Term Course
on

Deep Learning for Natural Language Processing (NLP)



November 18– 22, 2019

Conducted by

Department of Computer Science and
Engineering

in collaboration with

KIT-Centre for Educational Technology
IIT Guwahati



ABOUT IIT GUWAHATI

Indian Institute of Technology Guwahati (IITG), the sixth member of the IIT fraternity, was established in 1994. IIT Guwahati has been able to build up world class infrastructure for carrying out advanced research and has been equipped with state-of-the-art scientific and engineering instruments. IITG campus is on a sprawling 285 hectares plot of land on the north bank of the river Brahmaputra around 20 kilometres from the heart of the city. With the majestic Brahmaputra on one side, and with hills and vast open spaces on others, the campus provides an ideal setting for learning. <http://www.iitg.ac.in/>

The Department of Computer Science and Engineering, IITG started its academic programme in the year 1995 and provides an outstanding research environment complemented by excellence in teaching. The department offers B.Tech., M.Tech., Ph.D. and Dual (M.Tech.+ Ph.D.) degree programs. The department has a comprehensive curriculum on topics related to all aspects of computer hardware and software with an emphasis on practical learning. The department has around 30 faculty members actively involved in various cutting edge research domains in CSE. <http://www.iitg.ac.in/cse/>

ABOUT TEQIP-III

TEQIP an initiative of MHRD, Government of India is a long term program for quality enhancement and resource sharing of technical institutions in India. TEQIP-III was started in 2017-18 as Central Sector Scheme with a special focus on the low income states, north-eastern states, hill states and islands.

KIT (Knowledge Incubation Cell for TEQIP), established at IIT Guwahati under 2nd Phase of TEQIP, functions as a multi-disciplinary as well as interdisciplinary Innovation Incubation Centre with a focus to impart knowledge, infusing innovation and leading a path to achieve academic excellence. <http://www.iitg.ac.in/cet/teqip3.html>

OBJECTIVE AND OVERVIEW OF THE COURSE

Objectives of this course is two-fold. First, to provide mathematical understanding of various NLP methods. Second, to make participants familiar with commonly used tools and models for NLP through hands-on-sessions. Retrieving relevant information for natural language texts, extracting knowledge from it and representing them in a structured way are challenging problems. Natural Language Processing (NLP) analyses the above stated challenges and develop models to overcome them. Primary objective of the course is to introduce NLP fundamentals and relevant deep learning models for solving NLP problems. Another objective is to focus on learning by practicing. Thus, objective of the course can be summarized as follows:

- Introduce NLP fundamentals.
- Introduce commonly used Statistical and Machine Learning Models.
- Introduce Basic Deep Learning Models.
- Multiple Hands-On-Sessions to introduce basic tools and how to use them efficiently for basic NLP pre-processing, and building models.

COURSE CONTENTS

- Day 1: Introduction to Natural Language Processing (NLP), n-gram Language Model, Data Mining techniques for NLP, Getting Started with basic NLP tools (Hands-on).
- Day 2: Introduction to Neural Network, Building own Neural Network from Scratch (Hands-on).
- Day 3: Neural Language Models, Vector Semantics, Neural Models for Vector Representation.
- Day 4: Models for Sequence Labelling Task, Neural Models for Named Entity Recognition (NER), Building Deep Learning models (Hands-on).
- Day 5: Application, Effective Teaching Pedagogies, Machine Learning and NLP Research at IIT Guwahati.

KEY RESOURCE PERSONS

- Dr. Ashish Anand, Dept. of CSE, IITG
- Dr. Amit Awekar, Dept. of CSE, IITG
- Dr. Debapriya Basu, Dept. of Humanities and Social Sciences, IITG
- Dr. Deepanjan Kesh, Dept. of CSE, IITG
- Dr. Sanasam Ranbir Singh, Dept. of CSE, IITG
- Dr. V. Vijaya Saradhi, Dept. of CSE, IITG

ELIGIBILITY, REGISTRATION AND SELECTION

The course is open to faculty members of TEQIP-III mapped institutions. Please refer to "Institution List" link in the NPIU website for list of TEQIP-III mapped

institutions. However, PhD scholar / PG students from these institutions may be accommodated subject to the vacancy of seats. There will be a refundable registration fee of **2500 INR** for the participants from TEQIP-III mapped institutions. Seats that remain unfilled will be open to faculty/students of other institutions with a non-refundable registration fee of **2950 INR (2500 INR + 18% GST)**. There will be a total of 40 seats for the course based on application followed by shortlisting. The registration fee will cover course materials and working lunch.

BOARDING AND LODGING

For participants from TEQIP-III mapped institutions, based on request, accommodation can be arranged free of cost in the Institute Guest House for faculty members and student hostels inside IITG campus for research scholar / PG students. Participants from non-TEQIP institutes should make their own arrangements for boarding and lodging. However, we shall assist them to get accommodation inside campus if requested. No DA/TA will be paid to the participants from IIT Guwahati.

HOW TO APPLY

Interested candidates can find application form, registration details and guidelines in the course web page http://www.iitg.ac.in/awekar/teqip3_nlp/. Duly filled application form, endorsement form approved by the respective head of the institute and the registration fee Demand Draft drawn in favour of "Registrar, IIT Guwahati", payable at Guwahati should be sent to the Course Coordinator by speed post. Last date for receipt of application form and

registration fee DD is **31.10.2019**. Candidates from TEQIP-III mapped institutions can claim TA&DA from their respective institutions. IITG will not provide TA & DA.

COURSE COORDINATOR

Dr. Ashish Anand

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ACCOMODATION AND REGISTRATION SUPPORT TEAM

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For any query reach us via e-mail.

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