BRIEF REPORT

on

TEQIP III Sponsored

Short Term Course

on

Machine and Deep Learning in Computer Vision

August 09-13,2019

Coordinators

Dr Geeta Sikka

Associate Prof and Head CC

Dr Rajneesh Rani

Assistant Professor

Dr A K Verma

(Professor, TIET Patiala)

August 09,2019

- Dr. A K Verma delivered introductory lecture on Computer Vision, Visual Motion and Applications of Computer Vision.
- He discussed a project NONA that is a part of the WAS (wide area surveillance) project executed by the Homeland Security Advanced Research Project Agency (HSARPA).
- He also discussed the concepts of Flying Adhoc Networks and discussed the various challenges associated with it that can be used in research.

Dr Aditya Nigam

(Assistant Professor, IIT Mandi)

August 09 & 10,2019

- Dr. Aditya Nigam delivered expert lecture on "Introduction to Deep Learning" and " Convolution Neural Networks".
- He correlated the examples with difficult topics of deep learning to explain it in simpler way.
- He discussed the scope of deep learning in various fields and encouraged the participants to solve the research problems by implementing models of deep learning in research.
- He provided hands on session for deep learning in Python.

Dr Narottam Chand Kaushal

(Associate Professor, NIT Hamirpur)

August 11,2019

- Dr. Narottam Chand Kaushal explained the effectiveness of caching in wireless sensor networks.
- He elaborated advances and future trends in wireless sensor networks.
- He discussed the various research gaps in this field and motivated researchers to solve the various issues in this aspect.

Dr Kamlesh Dutta

(Associate Professor, NIT Hamirpur)

August 11,2019

- Dr. Kamlesh Dutta delivered expert lecture on "Machine Learning Algorithms and Evaluation Metrics".
- She explained several factors that might help the researchers in designing and constructing a new metric or choosing the suitable metric for discriminating the optimal solution of classification algorithms.

Dr. Maninder Singh
(Professor, TIET Patiala)
August 11,2019

- Dr. Maninder Singh delivered an illustrative session on Regression learning.
- He created a small dataset and explain how to divide it in training and testing data effectively.
- He explained how dataset plays an important role in minimizing mean squared error of the model and demonstrated it by graphs.
- He provided hands on session in different models in machine learning.

Dr Naveen Aggarwal

(Associate Professor, UIET, Chandigarh)

August 11,2019

- Dr. Naveen Aggarwal delivered expert lecture on "Text Classification".
- He discussed the various examples of text classification/ categorization that can be used by participants as research statement.
- He explained the scope and advantages of web crawler and discussed how it provides better results on customized query as compared to Google search engine.
- He discussed the various models of deep learning like BERT, XLNet etc. that can be used in natural language processing of text.

Dr Prateek Bhatia

(Associate Professor, TIET Patiala)

August 12,2019

- He delivered expert lecture on "Recognizing Object with Deep Learning".
- He discussed the steps for convolution neural networks to detect any object and explained the issues and challenges faced during object detection.
- He explained how faces are tagged and detected in Facebook and how this field can be utilized more in research.

Er. Puneet Jindal

(Eduwaive Foundation,Chandigarh)

August 12,2019

- Er. Puneet Jindal explained how does machine learning differ from traditional programming.
- He discussed the ways to determine the effectiveness of model.
- He encouraged participants to enroll in Machine Learning Crash Course with TensorFlow APIs provided by Google for the depth knowledge of it.

Dr T.P. Sharma

(Associate Professor, NIT Hamirpur)

August 12,2019

- Dr. T. P Sharma discussed Where Does Machine Learning Stand in Cyber Security.
- He explained that one of the significant challenges that researchers and the entire ML need to deal with if they are going to apply ML in cyber security successfully is malware classification and detection.