

R.M.K COLLEGE OF ENGINEERING AND TECHNOLOGY

RSM NAGAR, PUDUVOYAL 601206



DEPARTMENT OF  
ELECTRONICS AND COMMUNICATION  
ENGINEERING

POST EVENT REPORT

Webinar  
on  
Deep Learning for Natural Language  
Processing



SPEAKER

**Dr.M. Anand Kumar**

NIT, Karnataka



CONVENER

**Dr. N. Gangatharan**

Head of the Department - ECE



COORDINATORS

**Mr.R.Vijay Anandh**

Associate Professor - ECE

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Associate Professor - ECE

**Mr. Babu M**

Assistant Professor - ECE



12.05.2020

10.30 AM – 12.15 PM



# EVENT POSTER:

**RMK COLLEGE OF ENGINEERING AND TECHNOLOGY**  
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**

WEBINAR  
ON

**DEEP LEARNING FOR NATURAL LANGUAGE PROCESSING**

Convenor :  
**Dr. N GANGATHARAN**  
Professor & Head  
Department of ECE  
RMKCET

Organizers :  
**Mr. R Vijay Anand**  
ASP/ECE, RMKCET  
**Dr. K Kannan**  
ASP/ECE, RMKCET  
**Mr. M Babu**  
AP/ECE, RMKCET

**Dr. M ANAND KUMAR**  
NIT, KARNATAKA

**12.05.2020**  
**10:30 AM**

Register Here  
<https://bit.ly/35Jo95C>

STAY HOME : STAY SAFE : LEARN ONLINE

# REPORT:

## Summary

This webinar covered basics of Natural language Processing and Deep Learning concepts. Discussed the need for NLP, understanding Language, Top use cases for big data and NLP IN Health care, Finance, Education, Latent semantic analysis and word embeddings. In further, CBOW and Skip Gram models were explained and research problems were illustrated with datasets.

## BRIEF REPORT:

The ultimate goal of this webinar is to build computer system that perform natural language as humans do in day to day life. (making computers as intelligent as people) .

- ✓ Explanation on the similarities and differences were provided with diagrams.



- ✓ Concept of understanding Language by machine was explained with simple concepts

### Machine Learning

- + Good results with small data sets
- + Quick to train a model
- Need to try different features and classifiers to achieve best results
- Accuracy plateaus

### Deep Learning

- Requires very large data sets
- Computationally intensive
- + Learns features and classifiers automatically
- + Accuracy is unlimited



# BRIEF REPORT:

## ❖ Examples of NLP application cases in were discussed



<p><b>NLP in Education</b></p>	<ul style="list-style-type: none"> <li>• Innovative Education Applications</li> <li>• Educational Chat bots</li> <li>• Automatic Essay/answer Grading – Quality assessment</li> <li>• Automatic Question/ Exercise generation</li> <li>• Behaviour analytics.</li> </ul>
<p><b>NLP for Finance and Agriculture</b></p>	<ul style="list-style-type: none"> <li>• Sentiment Analysis – Stock Prediction</li> <li>• Chat bots for Financial/Investment suggestions</li> <li>• Chat bots for Farmers (Regional Languages)</li> <li>• Discovering crop disease trends using farmer queries</li> </ul>
<p><b>Word Embedding's (Word2vec Intuition)</b></p>	<p>word2vec builds a neural network that maps each word to its neighboring words (on its left and right sides).</p> <ul style="list-style-type: none"> <li>• Represent each word with a low-dimensional vector (direct representation)</li> <li>• Word similarity = vector similarity</li> <li>• Key idea: Predict surrounding words of every word</li> <li>• Faster and can easily incorporate a new sentence/document or add a word to the vocabulary</li> </ul>

# BRIEF REPORT:

## Difference between CBOW and Skip-Gram model

In the CBOW model, the distributed representations of context (or surrounding words) are combined to predict the word in the middle . While in the Skip-gram model, the distributed representation of the input word is used to predict the context

## Challenges-Social Media

The speaker discussed the real time cases with the model



Narendra Modi retweeted  
PMO India @PMOIndia · 1h  
Tweeting in Tamil, PM @narendramodi wished Shri Rajinikanth on his birthday & prayed for his long life & good health. @superstarrajini

sandhyacharu @Nimanga  
கற்பூரம் காட்டி வழிபட்ட காலண்டர் கடவுள் வருட முடிவில் குப்பைத்தொட்டி சென்றுவிட்டார்...  
adhu Enna oivoodhiyam? irukkum bothy Enna summava velai nadkkiradhu?

Aftr march 31 all will be busy wth semesters and practicals Aprm evan varuvaan protest ku .

## Research Directions

- Conversational Systems
- Machine Comprehension
- Fake news detection in Social media
- Named entity recognition in online forums Predicting Current and Future Psychological
- Health from Childhood Essays

## CONCLUSION:

The speaker addressed the future research directions in this area which includes

- ❖ problems in lack of sufficient annotated training data.
- ❖ Unsupervised feature learning (Deep learning).
- ❖ Dealing with Mixed scripts and Indian languages.

Finally, the speaker has provided sufficient instructions and resource materials to explore more on the topic NLP and Deep Learning.



# AUDIENCE FEEDBACK

This webinar was not like any other webinar where they just say abt the importance of the technology .this was very useful sir .Thank you for organizing.

**-RITHIKA M ,**

R.M.K. College of Engineering and Technology

Please do the subsequent sessions on this topic. webinar, fdp or workshop in a series manner which will be more helpful. kindly inform further programs to us through email. please share todays slides to our email. Thanks for conducting such a good webinar.

**-BLESSY J,**

Narayanaguru college of engineering

The webinar was highly informative and well presented!

**-PREETHI ANGEL S ,**

R.M.K. College of Engineering and Technology

Excellent

**DR.M.RAJKUMAR,**

RMD ENGINEERING COLLEGE

Expecting more programs like this-

**N.PRITHA,**

Panimalar Engineering College