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**DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING** 

# REPORT



on **ATAL Sponsored Faculty Development Program** "Data Science and its Applications"  $(06^{th} - 10^{th} December 2021)$ 



Lakireddy Bali Reddy College of Engineering (A) has organized ATAL Sponsored Faculty Development Program on "Data Science and its Applications" from  $06^{\text{th}} - 10^{\text{th}}$  December 2021. This FDP received an overwhelming response with 133 Participants (In-house Participants i.e., LBRCE – 32 (CSE – 27, Other Departments – 05) and Outside Participants – 101) from various institutes/colleges approved by AICTE and affiliated to various Universities across the arena of India.

Date: 06/12/2021

**Inauguration:** 

FDP was inaugurated on 06/12/2021 by Dr. D.V.L.N. Somayajulu, Director, IIITDM, Kurnool along with Mr. Nahar Singh, AI Continental Labs AG, Bengaluru, Dr. K. Appa Rao, Principal, Dr. M. Srinivasa Rao, Dean Academics, Dr. D Veeraiah, HOD and Convener of FDP, Dr. O. Rama Devi, Professor and Coordinator of FDP and Co-Coordinators of the FDP Dr. P. Bhagath, Mr. L.V. Krishna Rao, Mr. S. Srinivasa Reddy.

Mr. L.V. Krishna Rao has welcomed all the dignitaries and delegates. In his welcome speech, he highlighted the importance and objectives of organizing this faculty development programme.

Our Coordinator of the FDP, Dr. O. Rama Devi, started her speech by thanking AICTE and ATAL Academy committee members for accepting our proposal and granting the funds to conduct this FDP. Then she has thanked all the participants who have registered from the 14 states of the country who are not only from Andhra Pradesh/Telangana, but from different states like Maharashtra, Karnataka, Tamilnadu, Assam, Bihar, Rajasthan, Punjab, Delhi, Gujarat, Haryana etc. She then thanked all the Resource Persons Mr. Nahar Singh, Dr. Santosh Kumar, Mr. Ritesh Ratti, etc. for accepting our request irrespective of their busy

schedule. In her speech, she added that data is the fuel and key thing of any industry or research organization in this 21<sup>st</sup> century. Data Science is not limited to any field or application. It's wide range of applications include Healthcare, Web Engines, Recommender Systems, Detection Systems, Targeted Advertising, Speech Recognition, Gaming and more. For the next 5 days, various concepts related to AI, Deep Learning, Data Pre-processing, Classification, Algorithmic bias in Healthcare, Text Analytics, Object Detection, Graph Algorithms and Recommender Systems are going to be discussed.

In his Inaugural Speech, **Dr. D. Veeraiah, HOD & Convener,** thanked AICTE and ATAL Academy for choosing our college and providing the fund to conduct FDP. Then he thanked the Chief Guest Dr. D.V.L.N. Somayajulu for accepting our request and joining in the inaugural session. After that, he gave a brief intro about the Department of CSE and said that Data Science is not only limited to any single application, but it will help us in various fields such as data analysis, visualization, etc. He requested everyone in this FDP to attend all the sessions which will help them in identifying/doing some research in this thrust area.

**Dr. M. Srinivasa Rao, Dean Academics,** has thanked AICTE and ATAL Academy for giving this opportunity to our college to conduct FDP on Data Science and its Applications. Then he thanked the Chief Guest Dr. D.V.L.N. Somayajulu and Resource Person Mr. Nahar Singh for accepting our request and joining in the inaugural session. In his speech, he added that Data Science might be the new name to us now, but its roots are from long back and that has been turned to a buzz word now-a-day. Data Science is not only a platform for doing research, but it is giving the opportunity to many people in terms of job and career. He said that to get the information from the data, various scientific methodologies are being used. He added that "Data is very important, because data gives the information, information gives the knowledge, and knowledge gives the wisdom". In the end of his speech, he congratulated Convener, Coordinator, Co-Coordinators, and faculty members for organizing "A Right Program in a Right Time with Right Persons".

In his inaugural speech, worthy **Principal, Dr. K. Appa Rao** thanked the AICTE and ATAL Academy for selecting LBRCE (A) and sanctioning the amount to conduct the Faculty Development Program on "**Data Science and its Applications**". He said that Data Science is one of the emerging areas and everyone is talking about Artificial Intelligence and Data Science. Then he added if faculty got trained on the various concepts of this area, that can help in training the students on advanced and thrust area which helps in gaining knowledge by them. He requested all the participants to join in all the sessions and learn the advanced concepts related to Data Science. Then use the learned concepts for teaching them to the

students as well as do the research for the benefit of future and growth in the career and publish good research papers in reputed journals.

Chief Guest of the Inauguration, **Dr. D.V.L.N. Somayajulu, Director, IIITDM, Kurnool** started his speech by thanking LBRCE (A) for giving this opportunity to be a Chief Guest. He said that Data Science became a prominent buzz word today in the industry. He said roles of the Industrial Persons are changing in this decade from Software Engineers to the Data Scientist due to Data Science. "A data scientist is a professional responsible for collecting, analyzing and interpreting extremely large amounts of unstructured data". He added that a person who is having the knowledge of identifying good qualitative answer for supporting business decisions from the raw and unstructured data are having demand in the present scenario. He said that there is a scarcity in the industry for Data Scientists as the industries are moving towards Big Data. In the end, he said, as per the study of McKinsey, there is a shortage of more than 2 Lakh Data Scientists and 1.5 million managers and analysts in the USA itself.

Resource Person **Mr. Nahar Singh, Senior Manager, AI Continental Labs AG, Bengaluru**, in his inaugural speech conveyed thanks to Principal, Convener, Coordinator and Co-coordinators of this FDP for giving this opportunity to act as a Resource Person. In his speech, he highlighted that this 5-Day FDP is a package of various concepts related to the Data Science. He said that this FDP will cover what Data Science is, Computer Vision, NLP, Text Analytics, etc. which are the various components of the Data Science. This FDP will help the participants to learn a lot about data and how data can be used with respect to industry as well as academics.



Fig. 1: 06/12/2021 – Inauguration Banner of ATAL Sponsored FDP on Data Science and its Applications



Fig. 2: 06/12/2021 - Inaugural Speech by Coordinator of the FDP Dr. O. Rama Devi



Fig. 3: 06/12/2021 - Inaugural Speech by Convener of the FDP Dr. D. Veeraiah



Fig. 4: 06/12/2021 - Inaugural Speech by Principal Dr. K. Appa Rao



Report of ATAL Sponsored FDP on Data Science and its Applications (06/12/21 to 10/12/21)

Fig. 5: 06/12/2021 - Inaugural Speech by Chief Guest Dr. D.V.L.N. Somayajulu, Director IIITDM, Kurnool



Fig. 6: 06/12/2021 - Inaugural Speech by Guest of Honour and Session Resource Person Mr. Nahar Singh, Senior Manager, AI Continental Labs AG, Bengaluru

Day 1: 06/12/2021 (Sessions: 01 to 03)

## Session: 01

# Topics: General Introduction to AI, Hands-on Regression and Classification problems Resource Person: Mr. Nahar Singh, AI Labs Continental AG, Bengaluru

Our Resource Person, **Mr. Nahar Singh**, started his lecture by giving clear insights on what is artificial intelligence, how AI is useful in day-to-day life, difference among AI, Machine Learning and Deep Learning, and various branches on the Artificial Intelligence. Then he discussed about regression, classification problems and started hands-on session.

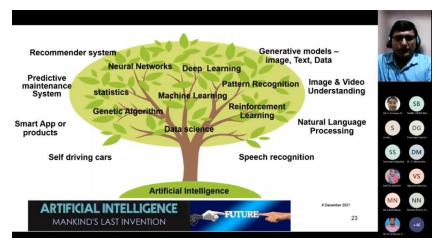


Fig. 7: 06/12/2021 - Session 01 by Mr. Nahar Singh on Introduction to AI

# Session: 02

# Topics: Machine Learning, Algorithmic bias in health care - I

# Resource Person: Dr. Santhosh Kumar, Midlands and Lancashire, NHS, London

Our Resource Person, **Dr. Santhosh Kumar**, started his lecture by giving clear insights on what is machine learning and what are the problems and myths we are facing with machine learning. Then he discussed about various bias in machine learning, deep learning, types of bias such as historical bias, representation bias, measurement bias, evaluation bias and aggregation bias in healthcare.

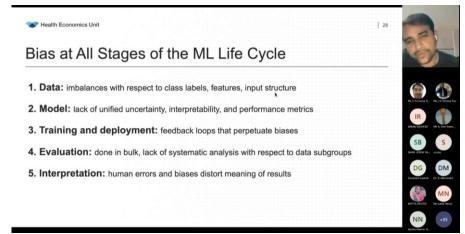


Fig. 8: 06/12/2021 – Session 02 by Dr. Santhosh Kumar on bias in ML & Healthcare

# **Topics: Introduction to Deep Leaning, Hands-on on Image Classification and Transfer learning**

# Resource Person: Mr. Nahar Singh, AI Labs Continental AG, Bengaluru

Our Resource Person, **Mr. Nahar Singh**, gave an overview on neural network, structure of a single artificial neuron (perceptron), different activation functions, and connected neural networks. Then he discussed about flow of forward and backward propagation, one-hot encoding, softmax activation/classifier in neural network and loss function. After that, he gave hands-on on training and testing the data in a dataset and getting the result of the test using CNN.

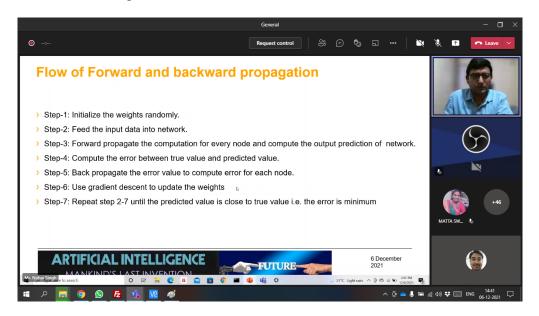


Fig. 9: 06/12/2021 - Session 03 by Mr. Nahar Singh on Neural Networks

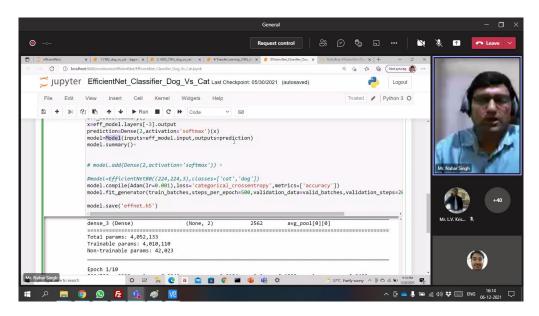


Fig. 10: 06/12/2021 – Session 03 by Mr. Nahar Singh Hands-on on Classification

Day 2: 07/12/2021 (Sessions: 04 to 06)

## Session: 04

Topics: General introduction to various text analytics module with Hands-on modules like NER, Text classification use cases

# Resource Person: Mr. Ritesh Ratti, Senior Data Scientist, Grab, Singapore

Our Resource Person, **Mr. Ritesh Ratti**, started his lecture by giving clear insights on what is NLP, how the data has been evolving and generating, and the basic components pf NLP. Then he discussed about various parts of speech tagging, entity, topic, text and relationship extractions and has shown the POSTagging-Perceptron and AddressParser.

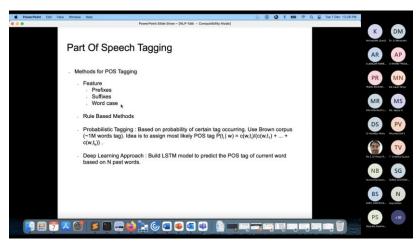


Fig. 11: 07/12/2021 – Session 04 by Mr. Ritesh Ratti on Text Analytics

# Session: 05

# **Topics: Data Pre-processing, Hands-on Exercise**

# Resource Person: Mr. T. Ram Kumar, Project Manager, Aditi Software, Hyderabad

Our Resource Person, **Mr. T. Ram Kumar**, started his lecture by giving clear insights on what is data, types of data, how data is generating in these days, and how data is cleaned. Then he has shown the live demonstration of reading the data from CSV and performing cleaning.

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Fig. 12: 07/12/2021 - Session 05 by Mr. T. Ram Kumar on Data Pre-Processing

## Topics: Algorithmic bias in health care - II

#### Resource Person: Dr. Santhosh Kumar, Midlands and Lancashire, NHS, London

Our Resource Person, **Dr. Santhosh Kumar**, started his lecture by giving clear insights on AI in healthcare in present situation. Then he discussed about Machine Learning in Healthcare and how it is improving the accuracy of diagnosis, prognosis and risk prediction of a patient which reduces the medication errors. After that, he discussed about the various ethical principles and core requirements of machine learning in healthcare.

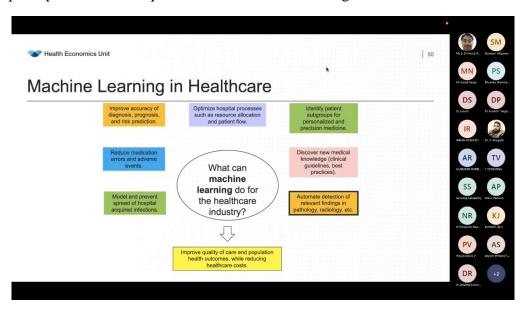


Fig. 13: 07/12/2021 – Session 06 by Dr. Santhosh Kumar on ML in Healthcare

Health Economics Unit & ML: Ethics Guideli	nes	
4 ethical principles:	7 core requirements:	Dr Sulesh
<ol> <li>Respect for human autonomy</li> <li>Prevention of harm</li> <li>Fairness</li> <li>Explicability</li> </ol>	<ol> <li>Human agency and oversight</li> <li>Technical robustness and safety</li> <li>Privacy and Data Governance</li> <li>Transparency</li> <li>Diversity, non-discrimination and fairness</li> <li>Societal and environmental wellbeing</li> <li>Accountability</li> </ol>	
(source: https://ec.europa.eu/futurium/en/ai- alliance-consultation/guidelines)		N Thingston Room
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Fig. 14: 07/12/2021 – Session 06 by Dr. Santhosh Kumar on AI & ML Ethics Guidelines in Healthcare

Day 3: 08/12/2021 (Sessions: 07 to 09)

## Session: 07

# Topics: Object detection, Hands-on on EfficientDet Object detector, Active learning Resource Person: Mr. Nahar Singh, AI Labs Continental AG, Bengaluru

Our Resource Person, **Mr. Nahar Singh**, started his lecture by giving clear insights on SSD, YOLO, R-CNN, and Fast R-CNN. After that, he discussed about one of the best object detection networks named EfficientDet and has shown the live demonstration of EfficientDet. Then he discussed about limitations of CNN and overcoming them with Transformers in CV.

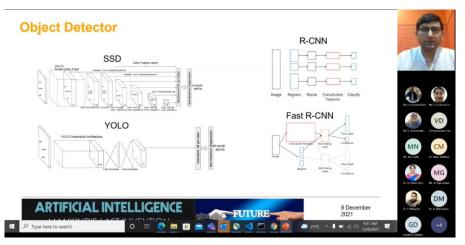


Fig. 15: 08/12/2021 – Session 07 by Mr. Nahar Singh on Object Detection and Transformers

# Session: 08

# **Topics: Regression algorithms, Hands-on Exercises**

# Resource Person: Mr. T. Ram Kumar, Project Manager, Aditi Software, Hyderabad

Our Resource Person, **Mr. T. Ram Kumar**, started his lecture by giving clear insights on ML, and the differences among AI/ML/DL/NN. Then he discussed about various types of Machine Learning types. After that, he has discussed the Regression Algorithms and shown the live demonstration of Regression Algorithms.

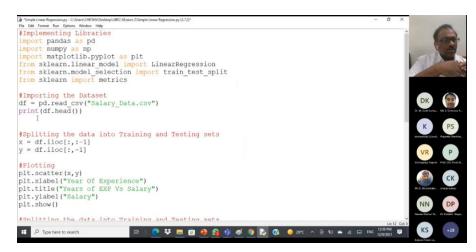


Fig. 16: 08/12/2021 – Session 08 by Mr. T. Ram Kumar on Regression Algorithms

## **Topics: Algorithmic bias in health care – III**

#### Resource Person: Dr. Santhosh Kumar, Midlands and Lancashire, NHS, London

Our Resource Person, **Dr. Santhosh Kumar**, started his lecture by giving clear insights on Whole Systems Integrated Care (WSIC) Dashboards. Then he gave idea about how to use integrated care data to understand the population and finding the innovative of working togetherness for better support the needs of the population. After that, he discussed about who are developing WISC, specifications of WISC and viewing the patient activity through WISCs.

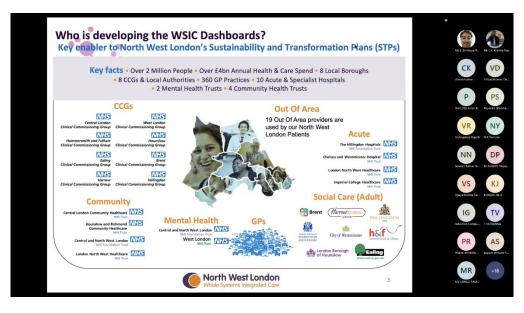


Fig. 17: 08/12/2021 – Session 09 by Dr. Santhosh Kumar on WSIC Dashboards

	Description of group	Data inclusion	12
Children with complex health needs	<ul> <li>People aged under 18 diagnosed with complex health needs, significant community (not GP) involvement, a MH inpatient stay, or a variety of outpatient appointments. Includes a variety of defined diagnoses, LTCs.</li> </ul>	<ul> <li>Age under 18</li> <li>Any of: 1+ defined LTCs<sup>1</sup>, 1+ defined list of primary care diagnoses, 5+ paeds OP appts, 2+ OP specialties, 1+ MH IP stay, 7+ community</li> </ul>	C K
Elderly people with learning disabilities	<ul> <li>People aged 65 or over who have a difficulty learning in a typical manner that affects academic, language and speech skills (excludes mild conditions that do not have an impact on social relationships or work)</li> </ul>	<ul> <li>Age 65+</li> <li>Learning disability flag in QOF, which includes Down's syndrome, some autism, and other disabilities that affect typical learning</li> </ul>	charan kurr
Adults with learning disabilities	Same as group 2 but for those that are aged between 18-64.	Age 18 and 64	P
Elderly people with Dementias, Alzheimer's and/or cognitive decline	<ul> <li>People aged 65 or over who have cognitive decline resulting from a medical disease rather than a psychiatric illness. Includes dementia as well as other conditions such as Huntington's and Parkinson's disease</li> </ul>	Age 65+     Primary care diagnoses: dementia, Alzheimer's, or other conditions     of cognitive decline, e.g. Huntington's & Parkinson's disease	Prof. (Dx) S
Adults with dementias, Alzheimer's and/or cognitive decline	<ul> <li>Same as group 4 but for those that are aged between 18-64.</li> </ul>	Age 18 and 64     Primary care diagnoses as for group 4	Vishoupity
Elderly people with severe & enduring mental illness	<ul> <li>People aged above 18 that have a mental health problem (typically people with schizophrenia or severe affective disorder) that experience a substantial disability as a result of their mental health problems</li> </ul>	Age 18+     Severe and enduring mental health condition, which includes     schizophrenia, bipolar disorder, personality disorders	N
Adults with severe and enduring mental illness	Same as group 6 but for those that are aged between 18-64.	Age 18 and 64     Severe and enduring mental health conditions as above	Naveen Ki
8 Children with one or more long term conditions	<ul> <li>People aged under 18 that have one or more long-term conditions<sup>2</sup>, e.g. asthma, diabetes, and not in another group. Includes common mental illnesses, e.g. depression, anxiety, and long term neurological conditions</li> </ul>	Age under 18     Have 1+ LTC     Not a member of group 1	V
Adults (18-65) with one or more long term conditions	<ul> <li>People aged between 18-64 that have one or more long-term conditions<sup>2</sup>, e.g. asthma, diabetes. Includes common mental illnesses, e.g. depression, anxiety. and long term neurological conditions</li> </ul>	Age between 18 and 64     Have 1+ LTC	Vijaya Kris
Elderly (>=65) with one or more LTCs	Same as group 8 but for those who are aged 65 or over	Age over 65     Have 1+ LTC	10
Mostly healthy children	People aged under 18 that are mostly healthy and do not fit into any other group	Age under 18     Not a member of any other group	Induction
Mostly healthy adults	Same as group 11 but for those that are aged between 18 and 64	Age between 18 and 64     Not a member of any other group	PF
Mostly healthy elderly (>65) people	Same as group 11 but for those that are aged 65 or over	Age over 65     Not a member of any other group	PHAN KIS

Fig. 18: 08/12/2021 – Session 10 by Dr. Santhosh Kumar on WSIC Data Population Segments

Day 4: 09/12/2021 (Sessions: 10 to 12)

#### Session: 10

# Topics: Transformer based models Sub word tokenization methods followed by Demo Resource Person: Mr. Ritesh Ratti, Senior Data Scientist, Grab, Singapore

Our Resource Person, **Mr. Ritesh Ratti**, started his lecture by giving clear insights on how to sequence the sequence modeling, what is a transformer, how self-attention process works, and how attention is different. After that, he discussed about Encoder Internals, various applications and shown the live demonstration of Transformer Library.

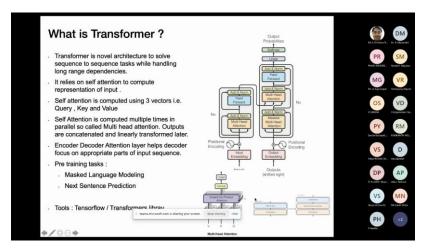


Fig. 19: 09/12/2021 - Session 10 by Mr. Ritesh on Transformers

# Session: 11

# **Topics: Classification algorithms, Hands-on Exercises**

# Resource Person: Mr. T. Ram Kumar, Project Manager, Aditi Software, Hyderabad

Our Resource Person, **Mr. T. Ram Kumar**, started his lecture by giving clear insights on Multi Linear Regression and Logistic Regression. Then he discussed about Naïve Bayes Classifiers for Classification based on the independence among predictors. After that, he has shown the live demonstration of Classification on Flower Dataset.

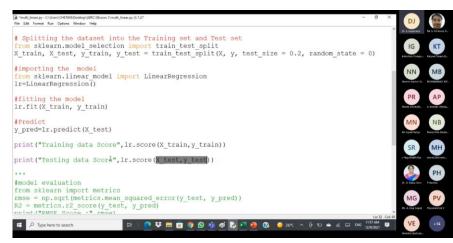


Fig. 20: 09/12/2021 – Session 11 by Mr. Ram Kumar on Classification Algorithms

# Topics: Introduction to open-source libraries for Graph Neural Network, Hands-on Resource Person: Dr. Akash Anil, SRM University, Andhra Pradesh

Our Resource Person, **Dr. Akash Anil**, started his lecture by giving clear insights on different network types such as social networks, brain neural connections, communication, bibliographic network, and biological networks. Then he gave idea about application of Network Analytics/Network Science and different challenges in Network Analytics. After that, he discussed about Unsupervised Node Embedding and Deep Learning on Graphs.

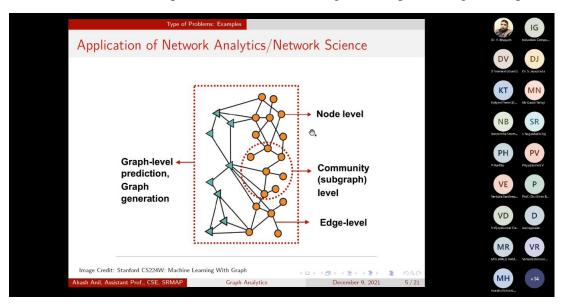


Fig. 21: 09/12/2021 - Session 12 by Dr. Akash Anil on Network Science

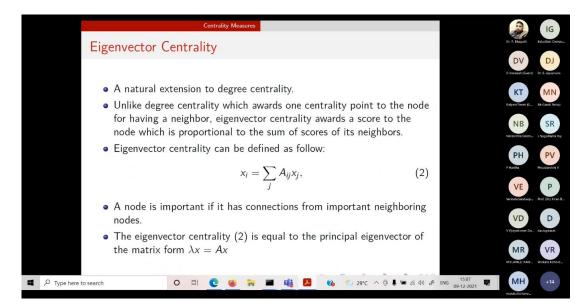


Fig. 22: 09/12/2021 – Session 12 by Dr. Akash Anil on Different Centralities in Network Analytics

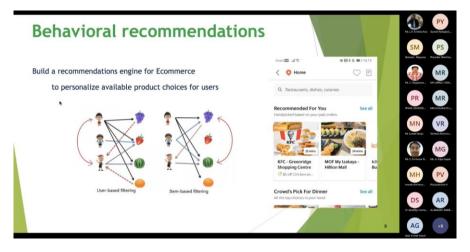
Day 5: 10/12/2021 (Sessions: 13 and 14)

## Session: 13

# **Topics: Recommendation systems**

## Resource Person: Mr. Ritesh Ratti, Senior Data Scientist, Grab, Singapore

Our Resource Person, **Mr. Ritesh Ratti**, started his lecture by giving clear insights on overview of how products will be recommended, what are the challenges in recommendation system, and types of recommendations. Then he discussed about the trending recommendation to customers which use learning-to-rank methods.





#### Session: 14

#### **Topics: A Comprehensive Knowledge on Neural Networks for Graph**

#### Resource Person: Dr. Akash Anil, SRM University, Andhra Pradesh

Our Resource Person, **Dr. Akash Anil**, started his lecture by giving clear insights on network representation learning / network embedding. After that, he discussed about various applications of network embedding such as knowledge representation, recommender systems, NLP, and Social Network Analysis. Then he has shown the live demo of Word Embedding.

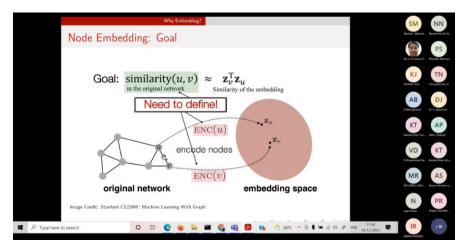


Fig. 24: 10/12/2021 - Session 14 by Dr. Akash Anil on Network Embedding and Applications

# Date: 12/11/2021

# Valedictory Session:

On the Valedictory Session, our Principal, Dr. K. Appa Rao and Dean Academics Dr. M. Srinivasa Rao, joined the session as Chief Guests along with Dr. D Veeraiah, Professor & HOD, Department of CSE, Dr. O. Rama Devi, Coordinator of FDP, and Co-Coordinators of the FDP Dr. P. Bhagath, Mr. L.V. Krishna Rao, & Mr. S. Srinivasa Reddy.

**Dr. O. Rama Devi, Professor, Department of CSE, Coordinator,** in her valedictory speech thanked ATAL Academy for sanctioning the FDP to our Department. Then she thanked all the Resource Persons Mr. Nahar Singh, Dr. Santhosh Kumar, Dr. Akash Anil, Mr. Ritesh Ratti and Mr. T. Anil Kumar for taking the sessions in this program. After that, she thanked all the participants for their active participation. She then thanked the faculty members and staff of the department for their continuous support and cooperation to her for conducting the FDP in a smooth and successful manner.

**Dr. D Veeraiah, Professor & HOD, Department of CSE, Convener,** in his valedictory speech thanked ATAL Academy for sanctioning the FDP to our Department. Then he thanked the Resource Persons for accepting the request and taking sessions in the FDP. After that, he said that all the participants should share the knowledge gained in this FDP for their research and to students of their institutions and requested them to train the students to do projects on Data Science related concepts.

At the end of the valedictory session, vote of thanks was given by **Mr. S. Srinivasa Reddy, Co-Coordinator of the FDP** in which he has been paid his gratitude towards all the participants who has spared their valuable time for attending this FDP. He also expressed the gratitude to the Resource Persons, Principal, Head of the Department and Management for giving this valuable opportunity.



Fig. 25: 10/12/2021 – Valedictory Banner of ATAL Sponsored FDP on Data Science and its Applications



Fig. 26: 10/12/2021 – Dr. O. Rama Devi, Coordinator of the FDP – Speech in Valedictory Session



Fig. 27: 10/12/2021 – Dr. D. Veeraiah, Convener of the FDP – Speech in Valedictory Session

Coordinator

(Dr. O. Rama Devi)

(Dr. D. Veeraiah)

V Principal (Dr. K. Appa Rao)

# Published in Media <u>about FDP</u>

# About Inauguration:

# Link: https://epaper.sakshi.com/3312942/Krishna-Constituencies/08-12-2021#nuzvid/1/2

శిక్షణను సబ్బనియోగం చేసుకోవాలి

**మైలవరం:** మైలవరం లకిరెడ్డి బాలిరెడ్డి ఇంజినీరిం గ్ కళాశాలలో ఏఐసీటీఈ-అటల్ అకాడమీ సహ కారంతో కంప్యూటర్ సైన్స్ విభాగం ఆధ్వర్యంలో నిర్వహిస్తున్న శిక్షణా కార్యక్రమాన్ని సద్వినియోగం చేసుకోవాలని కళాశాల బ్రిన్నిపాల్ డాక్టర్ కే. అప్పారావు తెలిపారు. మైలవరం లకిరెడ్డి బాలిరెడ్డి ఇంజిసీరింగ్ కళాశాలలో ఈనెల 6 నుంచి 10వ తేదీ వరకు డేటా సైన్స్ అండ్ ఇట్స్ అప్లికేషన్స్ అనే అంశంపై అధ్యాపకులు, రీసెర్స్ స్కాలర్స్, ఇం డ స్ట్రీ పర్సన్స్ క్ శిక్షణ ఇస్తున్నాయన్నారు. కన్వీనర్, 💿 దాని నుంచి విలువైన సమాచారాన్ని రాబట్టడానికి సీఎస్ఈ విభాగాధిపతి డాక్టర్ వీరయ్య మాట్లా డుతూ ప్రస్తుతం బిజినెస్లోని ముఖ్యమైన నిర్ణ న్నారు. డాక్టర్ డివీయల్య్ కోమయాజులు యాలు తీసుకోవడానికి డేటా ఎనాలిసిస్ ఎంతో ప్రసంగించారు. కోఆర్రినేటర్ డాక్టర్ రమాదేవి ఉపయోగకరవున్నారు. డీస్ ఎకాడమిక్స్ డాక్టర్ ధన్యవాదాలు తెలిపారు. ఈ కార్యక్రమంలో కోఆ ఎం.శ్రీనివాసరావు మాట్లాడుతూ ప్రస్తుతం ర్థినేటర్స్ డాక్టర్ పీ. భగత్, లిక్కి వెంకటేశ్వర రావు, రోజుకు 1.145 ట్రిలియన్ మెగాబైట్ల డేటా జన ఎస్. శ్రీనివాసరెడ్డి, అధ్యాపకులు, దేశంలోని



మైలవరం లకిరెడ్డి బాలిరెడ్డి ఇంజినీరింగ్ కళాశాలలో మాట్లాడుతున్న ప్రిన్నిపాల్ దాక్టర్ అప్పారావు

వివిధ డాటాల ఎనాలిసిస్ పద్దతులు నేర్చుకోవాల రేట్ అవుతుందని, అంత డేటాను అర్ధం చేసుకుని 🛛 వివిధ కళాశాలల అధ్యాపకులు పాల్గొన్నారు.

Red, 08 December 2021 https://epaper.sakshi.com/c/64824550

# About Closing of FDP:

#### Link: https://epaper.sakshi.com/3316029/Krishna-Constituencies/11-12-2021#nuzvid/1/1

# దేటా ఎనాలిసిస్ పై అవగాహన

మైలవరం: అల్గారిథమ్ టూల్స్ను డేటా ఎనాలిసిస్ కోసం ఉపయోగించాలని ప్రిన్సిపాల్ డాక్టర్ కే.అ ప్పారావు తెలిపారు. మైలవరం లకిరెడ్డి బాలిరెడ్డి ຊວສິ່ຽຽວກັ ຮອຈອບຍີ່ ພໍລກໍ່ພໍ່ఈ-అటల్ అకా డమీ సహకారంతో కంప్యూటర్ సైన్స్ విభాగం ఆధ్వర్యంలో డేటా సైన్స్ అండ్ ఇట్స్ అప్లికేషన్స్పై అధ్యాపకులకు నిర్వహిస్తున్న శిక్షణ కార్యక్రమం శుక్రవారం ముగిసింది. ఈ సందర్భంగా ప్రిస్పేపాల్ మాట్లాడుతూ శిక్షణ శిబిరంలో నేర్చుకున్న అంశా లను విద్యార్థులకు నేర్పించాలని, వాటితో ప్రాజే క్టులు చేయించాలన్నారు. ఈ కార్యక్రమంలో రిసోర్స్ పర్సన్ డాక్టర్ ఆకాష్ అనిల్, అసిస్టెంట్ ప్రాఫెసర్ ఎస్ఆర్ఎమ్ యూనివర్శిటీ, డీన్ అకాడ మిక్స్ డాక్టర్ శ్రీనివాసరావు, కన్వీనర్ సీఎస్ఈ విభాగాధిపతి డాక్టర్ వీరయ్య, ప్రోగ్రామ్ కోఆర్డినే టర్ డాక్టర్ ఓడుగు రమాదేవి ప్రసంగించారు. ఈ కార్యక్రమంలో అధ్యాపకులు, కోఆర్డినేటర్స్ డాక్టర్ పీ.భగత్, ఎల్.వెంకటకృష్ణారావు, శీలం శ్రీనివాస రెడ్డి, అధ్యాపకులు పాల్గొన్నారు.

(Dr. O. Rama Devi)

(Dr. D. Veeraiah)

Principal

(Dr. K. Appa Rao)