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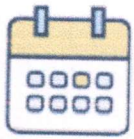
Department of Computer Engineering Organizes

Online Workshop on
Exploring the World of
Deep Learning

In Association with

The Institution of
Engineers (India)

**IEI
Student
Chapters**

29th February 2024

1:45 PM

Keynote Speaker

Ms. Pallavi Kulkarni
IT Digital Analyst/ Data
ScientistSLB, Pune

Workshop link will be provided on the same day

Open & Free to all

Online: Google MEET Platform

www.mmit.edu.in | Pune

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The Institution of
Engineers (India)

One day workshop on

"Exploring the world of DEEP LEARNING"

29th February 2024

Organized By

"येथे बहुतांचे हित"

Department of Computer Engineering

Marathwada Mitra Mandal's Institute of Technology, Lohgaon, Pune

Approved by **AICTE** New Delhi, Recognized by **DTE** Maharashtra & Affiliated to Savitribai Phule Pune
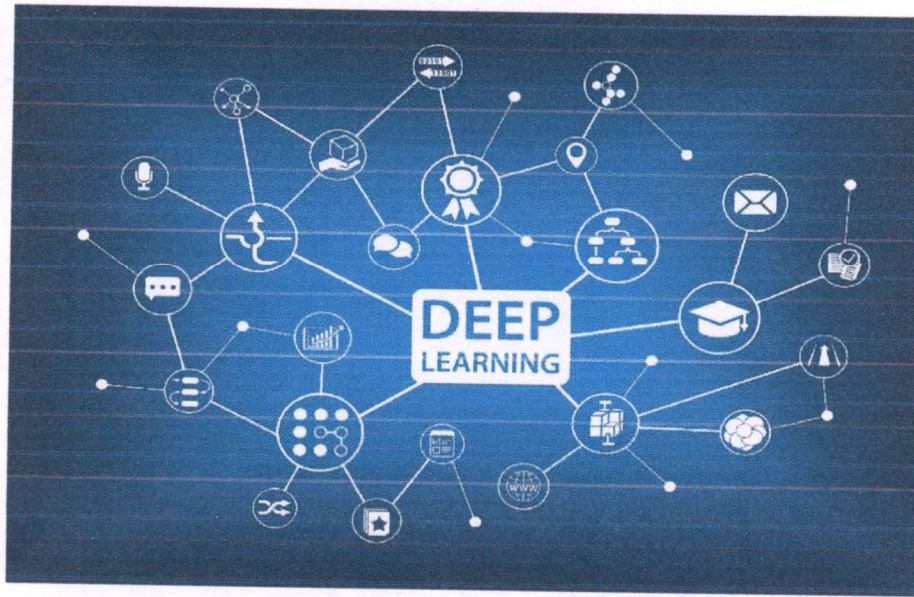NAAC "A" Accredited Institute

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Ms. Yamini P. Warke

Ms. Rohini D. Mahale

Assistant Professor, Computer Engineering, MMIT, Lohgaon, Pune

Speakers

Ms.Pallavi Kulkarni

IT Digital Analyst / Data Scientist

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Notice: **"Exploring the world of DEEP LEARNING"**

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"Towards Ubiquitous Computing Technology"
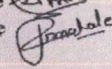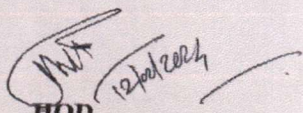## DEPARTMENT OF COMPUTER ENGINEERING

Date: 12/02/2024

NOTICE

All the students of TE(Comp) and BE(Comp), are hereby informed that the Computer Engineering Department is organizing a 2-hour Workshop on **"Exploring the world of deep learning"** which is arranged on Thursday 29-2-2024, at 1.45PM to 3.45 PM, interested students can register for this Workshop.

Registration link: – https://forms.gle/xwRWNUVRTPj4LAZ27

Details:

Online Platform: -Google Meet

Course Coordinator
  Ms. Yamini P. Warke
  Ms. Rohini D. Mahale

HOD
Dr. S. G. Rathod

"येथे बहुतांचे हित"

The Institution of
Engineers (India)

Department of Computer Engineering

(Academic Year 2023-24)

Date: 04/03/2024

"Exploring the world of DEEP LEARNING"

The Institutions of Engineers (IEI) organized Workshop on **"Exploring the world of DEEP LEARNING"** on 29th Feb 2024 at MMIT, Lohgaon, Pune. IEI hosted a session for students of computer departments to build awareness about Deep Learning.. The workshop starts by highlighting the relationship between deep learning, machine learning, and artificial intelligence and helps students to get comfortable with the TensorFlow. Student also got knowledge about neural networks, the structure of a perceptron, and how to use TensorFlow to create and train models.

Introduction:
Deep learning is a subset of machine learning. In supervised learning, we often use traditional machine learning techniques, such as support vector machines or tree-based models, where features are explicitly engineered by humans. However, in deep learning, the model explores and identifies the important features of a labeled dataset without human intervention. ANNs, inspired by biological neurons, have a layered representation, which helps them learn labels incrementally—from the minute details to the complex ones

Following topics are covered in the seminar
- Understanding Deep Learning:
- Convolution Neural Network
- Recurrent Neural Network
- Machine language Process

Understanding Deep Learning: Deep learning is a subset of machine learning that utilizes neural networks with multiple layers to progressively extract higher-level features from raw input. Understanding the basics of neural networks, such as feed forward networks, back propagation, activation functions, and gradient descent, is essential.

Neural Network Architectures: There are various architectures in deep learning, each suited for different tasks. Convolutional Neural Networks (CNNs) excel in image recognition and computer vision tasks, Recurrent Neural Networks (RNNs) are used for sequential data like time series and natural language processing, and Transformer models have gained popularity for tasks involving sequential data due to their attention mechanism.

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Frameworks and Libraries: TensorFlow and PyTorch are two of the most popular deep learning frameworks, offering high-level APIs that simplify the implementation of neural networks. Other frameworks like Keras (which can run on top of TensorFlow), MXNet, and Caffe are also widely used.

Data Preprocessing: Preprocessing data is crucial in deep learning tasks. Techniques like normalization, data augmentation, and feature scaling help improve the performance of neural networks and prevent overfitting.

Training Models: Training deep learning models often requires large amounts of data and computational resources. Understanding techniques for optimizing training, such as batch normalization, dropout, and learning rate schedules, is essential for achieving good performance.

Transfer Learning: Transfer learning is a technique where a pre-trained model is fine-tuned on a new dataset for a different task. This approach can significantly reduce the amount of labeled data required for training and accelerate the development process.

Applications: Deep learning has applications in various fields, including computer vision, natural language processing, speech recognition, healthcare, finance, and autonomous vehicles. Understanding how deep learning is used in real-world scenarios can provide insights into its capabilities and limitations.

Ethical Considerations: As with any technology, there are ethical considerations surrounding deep learning, such as bias in algorithms, privacy concerns, and the potential for job displacement. Exploring these issues is crucial for developing responsible AI systems.

Continuous Learning: The field of deep learning is rapidly evolving, with new architectures, techniques, and applications emerging regularly. Engaging in continuous learning through online courses, research papers, and conferences is essential for staying updated with the latest developments.

The details of Workshop are as follows:

Time: 01.45 PM.

Date: 29th February 2024

Mode: Online Mode (https://meet.google.com/idi-ribw-hyi?hs=224)

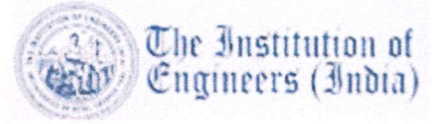**Resource Person: Ms.Pallavi Kulkarni**

       IT Analyst/ Data Scientist
       SBL, Pune.

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About Program:

Objective:

One objective of exploring the world of deep learning is to develop practical skills in implementing and training deep neural networks. This objective focuses on gaining hands-on experience with deep learning frameworks, such as Tensor Flow or PyTorch, and understanding how to build, train, and evaluate neural network models for various tasks. By achieving this objective, individuals can become proficient in applying deep learning techniques to solve real-world problems in fields like computer vision, natural language processing, and reinforcement learning. This practical skill development is crucial for advancing careers in artificial intelligence, machine learning, and data science, as well as for contributing to research and innovation in the field of deep learning.
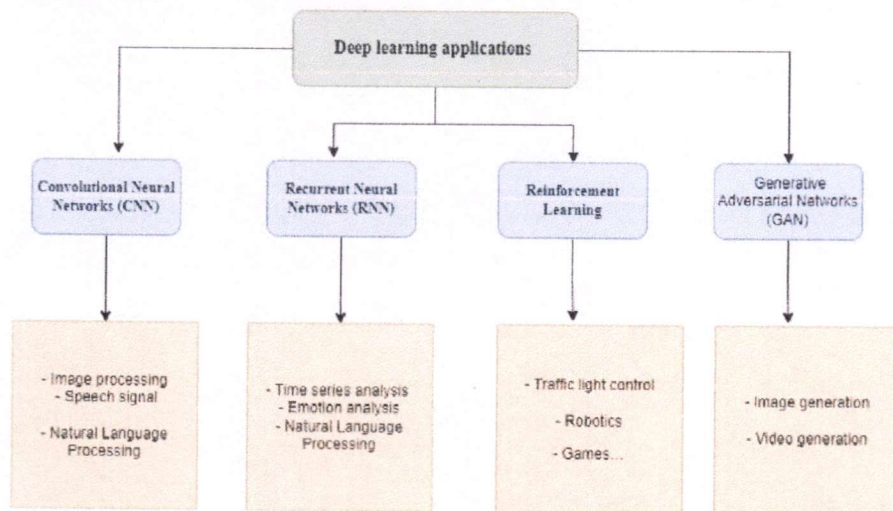
Activities performed:

In the session, the speaker shared information about basics of Deep learning applications, and real time scenario. Also given some insights on implementation of that scenario.

Total Duration of session is 2.00 hrs.

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Total Participants: 38 Students & 03 Faculties.

It was an interactive session where students' doubts were solved by the speaker.

Outcome:

Overall, the outcome of exploring the world of deep learning is a combination of theoretical understanding, practical skills development, problem-solving abilities, career advancement opportunities, and contributions to research and innovation, all while considering ethical considerations in the application of deep learning technologies.

List of students participated:

Attendance of Workshop			
Class and Div.	Name of the candidate	Roll no.	Email id
BE-A	Abhishek Sanjay Jadhav	BEA44	abhishekjadhav10000@gmail.com
BE-A	Vaibhav Balasaheb Deshmukh	BEA27	Vaibhav.deshmukh@mmit.edu.in
BE-A	Abhishek Sanjay Jadhav	BEA44	abhishekjadhav10000@gmail.com
TE-B	Akshaykumar Patil	Seb20	akshaykumar.patil22@mmit.edu.in
BE-B	Akash Ganesh Padir	BEB04	akash.padir@mmit.edu.in
BE-B	Yashwanti Shilvant Doke	SEB68	yashvantidoke@gmail.com
BE-B	Pooja Maruti Pawar	BEB13	pooja.pawar@mmit.edu.in
BE-B	Omkar Rajendra Badade	BEB57	onkarbadade2@gmail.com
TE-B	Vaishnavi Vikhe	SEA15	vaishnavi.vikhe@mmit.edu.in
TE-B	Dipanjali Bhujbal	TEB13	dipanjalibhujbal@gmail.com
TE-A	Siddhesh Shelke	TEA16	Siddhesh.shelke@mmit.edu.in
BE-A	Akshay Dinesh Vajanam	BEA03	akshay.vajanam@mmit.edu.in
BE-B	Vaibhav Vijaykumar Mule	BEB49	vaibhav.mule@mmit.edu.in
TE-B	Prathamesh Bhandekar	TEB02	prathamesh.bhandekar@mmit.edu.in
TE-B	Pallavi Jadhav	TEB55	pallavi.jadhav22@mmit.edu.in
TE-B	Ashwini Bhadane	TEB57	ashwini.bhadane22@mmit.edu.in
TE-B	Aishwarya Anil Sawant	TEB07	aishwarya.sawant@mmit.edu.in
TE-B	Wagh Nikita Kailas	TEB14	nikita.wagh@mmit.edu.in
TE-B	Kokadwar Sanket Dhananjay	TEB38	sanket.kokadwar@mmit.edu.in
TE-B	Shinde Pranal Jagannath	TEB18	pranal.shinde@mmit.edu.in
TE-B	Manasi Manik Konde	TEB 67	manasi.konde22@mmit.edu.in
TE-B	Dipanjali Bhujbal	TEB13	dipanjali.bhujbal@mmit.edu.in
TE-B	Tripura Patange	TEB62	tripura.patange22@mmit.edu.in
TE-B	Gitanjali Suresh Kamble	TEB63	gitanjali.kamble22@mmit.edu.in

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| BE-A | Tiya Suresh Jagtap | BEA47 | tiya.jagtap@mmit.edu.in |
TE-A	Tirthesh Mahajan	SEA61	tirthesh.mahajan22@mmit.edu.in
TE-A	Dnyaneshwari	SEA67	dnyaneshwari.shegokar22@mmit.edu.in
TE-A	Rohan Mate	SEA66	rohan.mate22@mmit.edu.in
TE-B	Harshal Salunke	SEB35	harshal.salunke22@mmit.edu.in
TE-B	Yuvraj solanke	SEB49	yuvraj.solanke22@mmit.edu.in
TE-B	Omkar Karale	TEB25	omkarok2510@gmail.com
TE-B	Akshay Patil	TEB18	akshaykumar.patil22@mmit.edu.in
TE-A	Pandurang Damdhare	A66	pandurang.damdhare@mmit.edu.in
TE-A	Madhav Kadam	TEA18	madhav.kadam@mmit.edu.in
BE-A	Sakshi Hule	BEA42	sakshi.hule@mmit.edu.in
TE-B	VIVEK YOGESH SANADI	TEB22	vivek.sanadi@mmit.edu.in
TE-B	Bankar Priyadarshani Parshuram	TEB21	priyadarshani.bankar@mmit.edu.in
TE-B	Abhay Shitole	SEB46	abhay.shitole22@mmit.edu.in

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Glimpses of the Session:
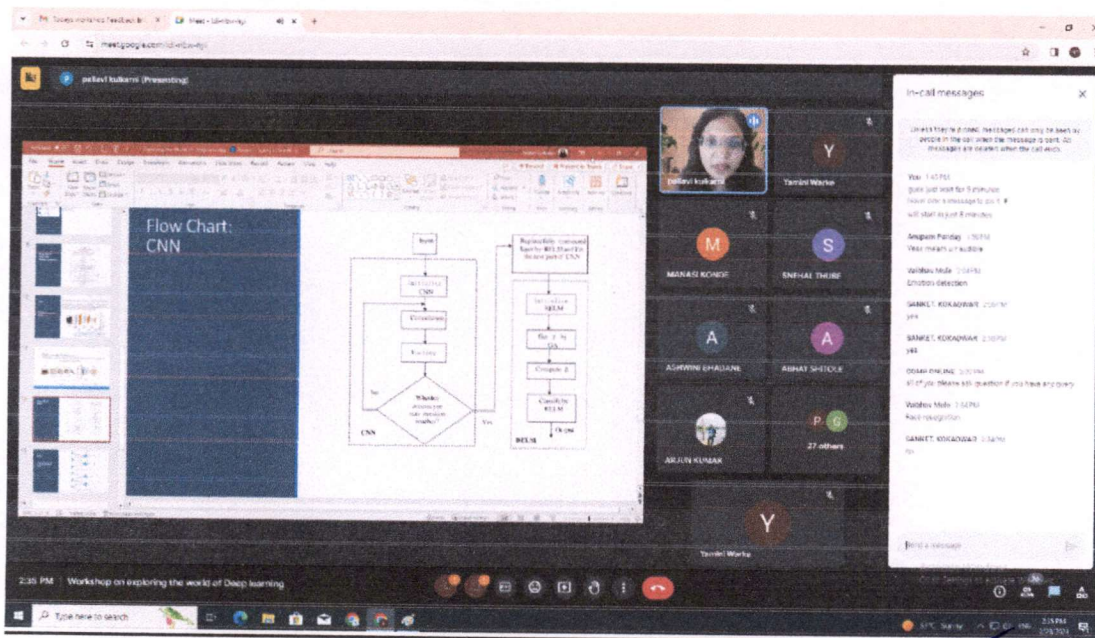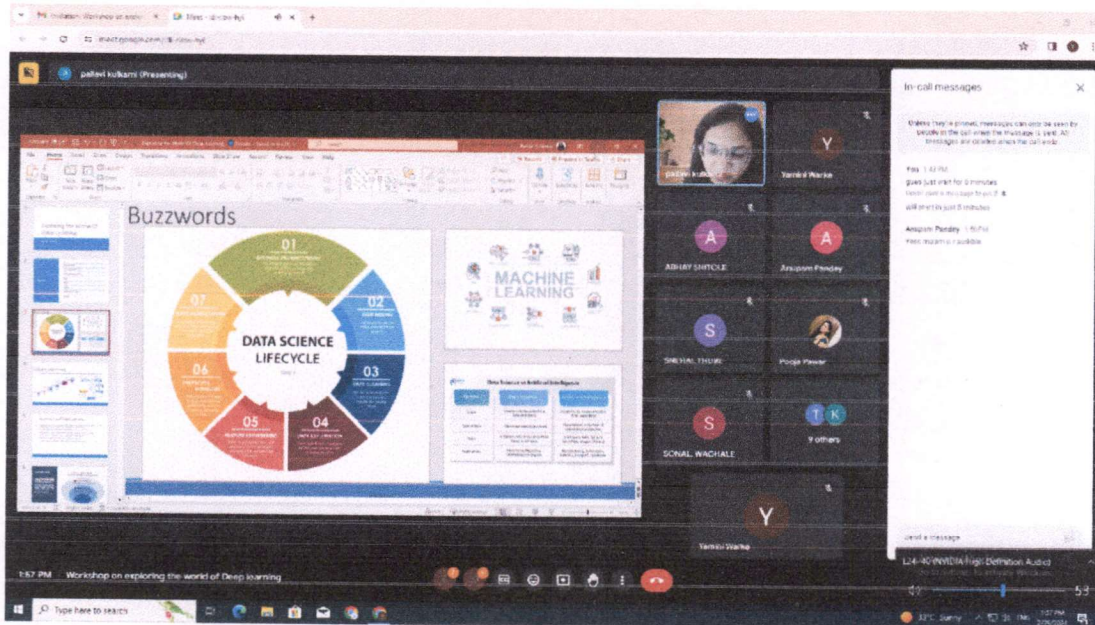
Prof.Y.P.Warke

Prof.R.D.Mahale

Coordinator

Dr. S. G. Rathod

Head of Department