DevOpsSchool
Lets Learn, Share & Practice DevOps

Day - 1	Day - 2
• **Introduction to Deep Learning:** Overview of deep learning concepts, architectures, and applications. • **Mathematics for Deep Learning:** Review of essential mathematical concepts, including linear algebra and calculus. • **Building Neural Networks:** Hands-on exercise on building a simple neural network using TensorFlow or Keras. • **Convolutional Neural Networks (CNNs):** Introduction to CNNs and their applications in computer vision tasks such as image classification and object detection. • **Hands-on Exercise:** Building a CNN for image classification using TensorFlow or Keras. • **Recurrent Neural Networks (RNNs):** Introduction to RNNs and their applications in natural language processing tasks such as language translation and text generation. • **Hands-on Exercise:** Building an RNN for text generation using TensorFlow or Keras.	• **Transfer Learning:** Introduction to transfer learning and its applications in deep learning, including fine-tuning pre-trained models for new tasks. • **Hands-on Exercise:** Fine-tuning a pre-trained CNN for image classification using TensorFlow or Keras. • **Generative Adversarial Networks (GANs):** Introduction to GANs and their applications in generating realistic images and videos. • **Hands-on Exercise:** Building a GAN for image generation using TensorFlow or Keras. • **Object Detection and Segmentation:** Introduction to object detection and segmentation using deep learning, including popular architectures such as Faster R-CNN and Mask R-CNN. • **Hands-on Exercise:** Building an object detection and segmentation model using TensorFlow or Keras. • **Advanced Topics:** Discussion of advanced deep learning topics such as reinforcement learning, attention mechanisms, and deep reinforcement learning. • **Future Directions:** Discussion of the current state and future directions of deep learning research and applications.