Machine Learning

Section 1 –

- **Deep Learning Models**
- **Deep Learning Platforms and Software Libraries**
- **Introduction to TensorFlow**
- **Convolutional Neural Networks (CNN)**
- **Recurrent Neural Networks (RNN)**
- **Introduction to Natural Language Processing**
- **Natural Language Understanding Techniques**
- **Natural Language Processing Libraries**
- **Natural Language Processing with Machine Learning and Deep Learning**
- **Speech Recognition Technique**

*1. Build a deep learning model using TensorFlow to classify images in a given dataset into multiple categories.
*2. Develop a recurrent neural network (RNN) model using TensorFlow for sequence prediction or text generation tasks.
*3. Build a chatbot using a combination of NLP techniques and deep learning models.
*4. Develop a language translation system using sequence-to-sequence models in TensorFlow.
*5. Build a recommendation system using deep learning models for personalized product recommendations.
*6. Develop a deep learning-based question answering system using natural language understanding techniques.
*7. Implement a sentiment analysis model for social media data using deep learning and NLP libraries.
*8. Build a text generation model using recurrent neural networks for generating creative and coherent text.
*9. Implement a deep learning-based image captioning system that generates textual descriptions for images.
*10. Build a deep learning-based emotion detection system for analyzing and classifying emotions in text or speech data.

#1. Implement a convolutional neural network (CNN) using TensorFlow for image recognition tasks.
#2. Create a natural language processing (NLP) model using TensorFlow to perform sentiment analysis on text data.
#3. Implement a text classification model using TensorFlow for document categorization tasks.
#4. Create a speech recognition system using deep learning techniques and libraries such as TensorFlow and Keras.
#5. Implement a text summarization model using deep learning techniques for generating concise summaries of long texts.
#6. Build a named entity recognition (NER) model using deep learning to identify and classify named entities in text data.
#7. Create a deep learning-based chatbot that can engage in natural language conversations and answer user queries.
#8. Develop a deep learning model for text classification using word embeddings and recurrent neural networks.
#9. Create a language model using deep learning techniques for auto-completion and text generation.
#10. Develop a deep learning model for named entity recognition in medical texts for identifying medical terms and entities.