

# INFOSOFT IT SOLUTIONS

## Training | Projects | Placements

Revathi Apartments, Ameerpet, 1<sup>st</sup> Floor, Opposite Annapurna Block, Info

soft it solutions Software Training& Development 905968394,918254087

## **AZURE COGNITIVE SERVICES**

### **Introduction to Azure Cognitive Services**

- Overview of Azure Cognitive Services
- Key features and benefits
- Cognitive Services APIs overview

### **Vision APIs**

- Computer Vision API
  - Image analysis and tagging
  - Object detection and recognition
  - Optical character recognition (OCR)
- Face API
  - Face detection and identification
  - Emotion detection
  - Face verification

### **Speech APIs**

- Speech to Text API
  - Speech recognition
  - Transcription of spoken language
- Text to Speech API
  - Speech synthesis
  - Convert text into spoken language

## **Language APIs**

- Text Analytics API
  - Sentiment analysis
  - Key phrase extraction
  - Language detection
- Translator Text API
  - Language translation
  - Text transliteration

## **Decision APIs**

- Content Moderator API
  - Text moderation
  - Image moderation
- Personalizer API
  - Personalized recommendations
  - Content customization
- QnA Maker API
  - Build and deploy Q&A bots
  - Natural language understanding

## **Integration and Deployment**

- Integrating Azure Cognitive Services into applications
- Deployment considerations and best practices
- Monitoring and troubleshooting Cognitive Services

## **Advanced Topics**

- Customizing and training models
- Cognitive Services Containers
- Ethical considerations and privacy concerns

## **Custom Vision Service**

- Creating and training custom image classification models
- Object detection and image segmentation using Custom Vision
- Integration with Azure IoT Edge for edge deployment

## **Speech Translation and Speech Synthesis Customization**

- Customizing Neural Text to Speech (TTS) models
- Advanced techniques in speech synthesis and voice cloning
- Multi-language and dialect support in Translator Text API

## **Natural Language Processing (NLP) Enhancements**

- Entity recognition and linking with Named Entity Recognition (NER) APIs
- Advanced sentiment analysis techniques
- Fine-tuning language models with Text Analytics API

## **Deep Learning with Azure Cognitive Services**

- Using Azure Machine Learning to train and deploy custom models
- Transfer learning with pretrained models in Vision and Language APIs
- Implementing neural network architectures for specific use cases

## **Cognitive Services Integration Patterns**

- Building complex workflows using multiple Cognitive Services APIs
- Implementing real-time analytics pipelines with Cognitive Services
- Integration with Azure Functions and Logic Apps for event-driven scenarios

## **Cognitive Services Security and Compliance**

- Data privacy considerations with Cognitive Services
- Implementing encryption and access controls
- Compliance with GDPR and other regulatory frameworks

## **Performance Optimization and Scalability**

- Techniques for optimizing Cognitive Services for speed and efficiency
- Scaling Cognitive Services for high availability and global deployments
- Monitoring and performance tuning strategies

## **Ethical AI and Bias Mitigation**

- Understanding ethical considerations in AI and Cognitive Services
- Bias detection and mitigation techniques in model training