

# **GUIDANCE POINT:- PUNE'S PREMIER EDUCATION HUB**

Welcome to Guidance Point, your ultimate destination for comprehensive education and professional development! At Guidance Point, we believe in empowering individuals to unlock their full potential through accessible and high-quality education. With a vast array of courses covering all domains, from technology to arts, business to sciences, we strive to cater to the diverse learning needs of our users. Whether you're a student looking to enhance your academic performance, a professional aiming to upskill or reskill, or an enthusiast eager to explore new interests, Guidance Point is here to guide you every step of the way. What sets us apart is our commitment to excellence. We meticulously curate our course offerings, partnering with the best institutes and industry experts to ensure that you receive top-notch education that is both relevant and practical. Our platform leverages cutting-edge technology and innovative teaching methodologies to deliver engaging and immersive learning experiences.

## **BENEFITS:-**

### **1. Comprehensive Course:**

Our comprehensive course ensures thorough coverage of essential topics, equipping you with a well-rounded understanding of your subject matter, setting a strong foundation for your future endeavors.

### **2. Top Institute Partnerships:**

Through our partnerships with leading institutes, you gain access to world-class resources, expert guidance, and prestigious

certifications, empowering you to excel in your field and stand out among your peers.

### 3. Advanced Learning Technology:

Leveraging advanced learning technology, we offer dynamic and interactive learning experiences, incorporating simulations, virtual labs, and multimedia resources to enhance comprehension and retention of complex concepts.

### 4. Supportive Community:

Join our vibrant and supportive community of learners, mentors, and industry professionals, where you can collaborate, seek advice, and find encouragement, fostering a conducive environment for growth and success.

### 5. Personalized Learning Paths:

Tailor your learning journey to suit your unique needs and goals with our personalized learning paths, allowing you to progress at your own pace and focus on areas that align with your interests and career aspirations.

### 6. Quality Assurance Standards:

Rest assured that our courses adhere to rigorous quality assurance standards, ensuring that you receive high-quality instruction, updated curriculum, and valuable resources that meet industry benchmarks and standards.

### 7. Interactive Learning:

Engage in dynamic and interactive learning experiences through our immersive course content, live sessions, quizzes, and discussions, promoting active participation, collaboration, and deeper understanding of the material.

## 8. Career Opportunities:

Explore abundant career opportunities and pathways in your chosen field, supported by our comprehensive curriculum, industry partnerships, and career services, empowering you to pursue your dream job and achieve professional success.

# SYLLABUS

## 1: INTRODUCTION TO NATURAL LANGUAGE PROCESSING

- Overview of natural language processing (NLP)
- Applications of NLP in various fields
- Challenges and limitations of NLP
- Introduction to NLP libraries and tools: NLTK, SpaCy, Gensim

## 2: TEXT PREPROCESSING TECHNIQUES

- Tokenization: Breaking text into words or tokens
- Lemmatization: Reducing words to their base or dictionary form
- Stemming: Removing affixes from words to obtain their root form
- Stopword Removal: Filtering out common words that carry little meaning
- Part-of-Speech (POS) Tagging: Assigning grammatical tags to words

### **3: TEXT CLASSIFICATION AND SENTIMENT ANALYSIS**

- Text classification: Categorizing text into predefined classes or categories
- Sentiment analysis: Identifying and extracting sentiment or opinion from text data
- Machine learning algorithms for text classification: Naive Bayes, Support Vector Machines (SVM), Logistic Regression
- Deep learning models for sentiment analysis: Recurrent Neural Networks (RNNs), Convolutional Neural Networks (CNNs)

### **4: NAMED ENTITY RECOGNITION (NER)**

- Understanding named entities: Persons, organizations, locations, dates, etc.
- NER techniques: Rule-based approaches, statistical models, and deep learning methods
- NER libraries and tools: SpaCy, NLTK, Stanford NER, OpenNLP

### **5: TOPIC MODELING (LATENT DIRICHLET ALLOCATION)**

- Introduction to topic modeling: Discovering hidden thematic structures in text corpora
- Latent Dirichlet Allocation (LDA): Probabilistic model for topic modeling
- Training LDA models and interpreting topic distributions
- Applications of topic modeling: Document clustering, information retrieval, and recommendation systems

### **6: WORD EMBEDDINGS (WORD2VEC, GLOVE)**

- Word embeddings: Representing words as dense vectors in a continuous vector space

- Word2Vec: Skip-gram and Continuous Bag-of-Words (CBOW) architectures
- GloVe (Global Vectors for Word Representation): Learning word vectors from co-occurrence statistics
- Applications of word embeddings: Text similarity, document classification, and machine translation

## **7: SEQUENCE-TO-SEQUENCE MODELS (SEQ2SEQ) FOR MACHINE TRANSLATION**

- Introduction to sequence-to-sequence (Seq2Seq) models
- Encoder-Decoder architecture for machine translation
- Training Seq2Seq models with attention mechanisms
- Applications of Seq2Seq models: Neural machine translation, text summarization, and dialogue systems