

INFOSOFT IT SOLUTIONS

Training | Projects | Placements

Revathi Apartments, Ameerpet, 1st Floor, Opposite Annapurna Block,

Infosoft It solutions, Software Training & Development Institute, 9059683947 | 9182540872

Artificial Intelligence

Introduction to Artificial Intelligence

- Overview of Artificial Intelligence: Definition, history, and evolution
- Applications of AI in various domains: Healthcare, Finance, Gaming, etc.
- Ethical and societal implications of AI: Bias, Privacy concerns, AI Ethics

AI Foundations

- Introduction to Machine Learning (ML) and Deep Learning (DL): Basic concepts and differences
- Supervised Learning: Regression, Classification (Linear Regression, Logistic Regression)
- Unsupervised Learning: Clustering, Dimensionality Reduction (K-means, PCA)

Neural Networks and Deep Learning

- Introduction to Neural Networks: Perceptrons, Activation functions (ReLU, Sigmoid)
- Deep Neural Networks (DNNs): Architecture, Forward and Backward Propagation
- Convolutional Neural Networks (CNNs): Image Recognition, Transfer Learning
- Recurrent Neural Networks (RNNs): Sequential Data, Natural Language Processing (NLP)

Natural Language Processing (NLP)

- Introduction to NLP: Tokenization, Text Preprocessing
- NLP Techniques: Named Entity Recognition (NER), Sentiment Analysis, Text Generation
- Language Models: Word Embeddings (Word2Vec, GloVe), Transformers (BERT, GPT)

Reinforcement Learning

- Introduction to Reinforcement Learning (RL): Agents, Environments, Rewards
- RL Algorithms: Q-Learning, Policy Gradient Methods
- Applications of RL: Game playing (AlphaGo), Robotics, Autonomous systems

AI in Practice

- AI Development Lifecycle: Problem formulation, Data Collection, Model Selection, Evaluation
- Model Deployment and Scaling: Cloud Services (AWS, Azure, Google Cloud)
- AI Tools and Frameworks: TensorFlow, PyTorch, Scikit-Learn, Keras

AI Applications

- Computer Vision: Object Detection, Image Segmentation, Facial Recognition
- AI in Healthcare: Disease Diagnosis, Medical Imaging Analysis
- AI in Finance: Algorithmic Trading, Fraud Detection

AI and Ethics

- AI Bias and Fairness: Mitigation strategies, Fairness in ML Models
- Privacy and Security in AI: Data Protection, Confidentiality
- Regulation and Governance: AI Policies, Compliance with AI Ethics Guidelines

AI Research and Innovation

- Latest Trends in AI Research: Generative Models, AutoML, Explainable AI
- Future of AI: Ethical AI, Human-AI Collaboration, AI for Social Good

Hands-on Projects and Case Studies

- Implementing AI Algorithms: Hands-on projects covering supervised, unsupervised, and reinforcement learning
- Real-world AI Applications: Case studies from industry and academia

Career Development in AI

- Skills and Competencies for AI Professionals: Programming, Mathematics, Problem-solving
- AI Certifications and Career Paths: Data Scientist, Machine Learning Engineer, AI Researcher
- Job Market Trends and Opportunities: Salary Insights, Industry

AI and Society

- Impact of AI on Jobs: Automation, Reskilling, Future of Work
- AI in Education: AI-driven Learning Systems, Personalized Learning
- AI for Sustainability: Climate Change, Resource Management

AI Governance and Policy

- Global AI Policies and Regulations: GDPR, AI Ethics Guidelines (IEEE, ACM)
- AI Governance Frameworks: Responsible AI Practices, Risk Management

Emerging Technologies and AI

- AI and Internet of Things (IoT): Smart Cities, Connected Devices
- AI and Blockchain: Smart Contracts, Decentralized AI

Final Project and Capstone

- Capstone Project: Designing and implementing an AI solution from scratch
- Presentation and Evaluation: Demonstrating proficiency in AI concepts and applications