Ecorporate Trainings: AI & ML Course

Ecorporate Trainings is excited of its comprehensive Artificial Intelligence and Machine Learning Training Course. Designed for tech professionals and data enthusiasts, this programme offers deep dives into cutting-edge AI technologies, practical applications, and industry-recognised certification. Prepare to elevate your skills and step into the future of technology.

Ecorporate Trainings
Transforming learners into leaders.

About Ecorporatetrainings:-

Ecorporatetrainings leading e-learning platform providing live instructor-led interactive online training. We cater to professionals and students across the globe in categories like Big Data & Hadoop, Business Analytics, NoSQL Databases, Java & Mobile Technologies, System Engineering, Project Management and Programming. We have an easy and affordable learning solution that is accessible to millions of learners.

Ecorporatetrainings Masters Program will provide you in-depth knowledge of front-end and back-end technologies including JavaScript, HTML, CSS, NodeJS, Python, AngularJS, MongoDB ,Data Analysis, UI/UX Designing, DevOps, AI and ML, Cloud computing, Oracle, and many more thereby making you an expert . The program provides access to 200+ hours of interactive online learning, 10+ industry-based use cases, skills specific assessments and other resources. There are no prerequisites for enrolment to the Masters Program. It is designed and developed to accommodate diverse professional backgrounds. Our Masters Program recommends the ideal path for becoming a Full Stack Developer and Analyst and however, it is learners preference to complete the courses in any order they intend to.

Why Choose AI & ML with Ecorporate Trainings?

In today's rapidly evolving technological landscape, Artificial Intelligence and Machine Learning are no longer just buzzwords; they are essential skills for career advancement and innovation. This course provides a unique opportunity to gain expertise in areas that are redefining industries globally.

Future-Ready Skills

Acquire knowledge directly applicable to the most in-demand roles in the tech sector.

Expert-Led Instruction

Learn from seasoned professionals with extensive real-world experience in AI and ML.

Practical, Hands-On Learning

Engage with live projects and gain practical experience with popular frameworks and platforms.

Key Modules of the Programme

Our AI & ML course is meticulously structured to cover a wide array of topics, ensuring a holistic understanding of the field. From foundational concepts to advanced applications, each module is designed to build upon your knowledge progressively.

1.Generative AI

Explore the principles behind creating new content using AI and master the art of crafting effective prompts to guide AI models.

1.1.Introduction to Generative AI

1.1.1.Overview of Generative AI

1.1.2.Understanding AI Foundations

1.2.Core NLP Techniques

1.2.1.NLP Basics

1.2.2.Encoding Techniques

1.3.NLP Models

1.3.1.Advanced Architectures

1.3.2.Generative Models

1.3.Advanced NLP Concepts

1.4.Large Language Models (LLMs)

1.4.1.LLM Foundations

1.4.2.Instruction and Fine-Tuning

1.5.Deployment and LLM Operations

1.5.1.Deployment Considerations

1.5.2.LLMOps for Scalability

1.6.Ethical and Responsible AI Use

1.6.1.Ethical Considerations

1.6.2.Real-World Case Studies

2.Prompt Engineering

2.1.Foundations of Generative AI

2.1.1.Understanding AI: Descriptive vs. Generative

2.1.2.Introduction to Natural Language Processing (NLP)

2.1.3.Understanding Large Language Models (LLMs)

2.1.4.Introduction to GPT Models

2.2.Introduction to Prompt Engineering

2.2.1.Fundamentals of Prompt Engineering

2.2.2.Content Generation with Prompts

2.2.3.Tokens and Parameters in AI

2.3.Advanced Prompt Techniques

2.3.1.Learning Approaches

2.3.2.Fine-Tuning and Model Parameter Adjustments

2.3.3.Handling Hallucinations & Bias in AI

2.4.Crafting and Optimizing Prompts

2.4.1.Complex Prompt Techniques

2.4.2.Iterative Refinement and Optimization

2.5.Evaluating and Testing Prompts

2.5.1.Metrics for Prompt Evaluation

2.5.2.Cross-Model and Multi-Task Testing

2.6.Applications of Prompt Engineering

2.6.1.Code Generation

2.6.2.Image & Video Content Creation

2.6.3.Natural Language Processing Applications

2.6.4.Music and Poetry Generation

2.7.Ethics and Responsible AI Usage

3.Machine Learning

Delve into core algorithms, neural networks, and advanced techniques that form the backbone of modern AI.

3.1.Introduction to Machine Learning

- 3.1.1.Overview of Machine Learning
- 3.1.2.Types of Machine Learning
- 3.1.3.Key Terminologies in ML

3.2.Data Preprocessing

- 3.2.1.Data Cleaning and Preparation
- 3.2.2.Data Transformation
- 3.2.3.Feature Engineering

3.3.Supervised Learning Algorithms

- 3.3.1.Linear Regression
- 3.3.2.Classification Algorithms
- 3.3.3.Model Evaluation Metrics for Regression and Classification

3.4.Unsupervised Learning Algorithms

- 3.4.1.Clustering Techniques
- 3.4.2.Dimensionality Reduction
- 3.4.3.Anomaly Detection

3.5.Advanced Machine Learning Algorithms

- 3.5.1.Ensemble Methods
- 3.5.2.Neural Networks and Deep Learning Basics
- 3.5.3.Reinforcement Learning Basics

3.6.Model Evaluation and Optimization

- 3.6.1.Cross-Validation Techniques
- 3.6.2.Hyperparameter Tuning
- 3.6.3.Dealing with Overfitting and Underfitting

3.7.Machine Learning in Production

- 3.7.1.Model Deployment
- 3.7.2.Monitoring and Maintaining Models
- 3.7.3.Ethical and Responsible AI

4.Deep Learning Techniques

4.1.Introduction to Deep Learning

4.1.1.What is Deep Learning?

4.1.2.Applications of Deep Learning

4.1.3.Key Concepts and Terminologies

4.2.Fundamentals of Neural Networks

4.2.1.Artificial Neurons and Perceptrons

4.2.2.Feedforward Neural Networks

4.2.3.Activation Functions

4.3.Training Deep Neural Networks

4.3.1.Loss Functions

4.3.2.Optimization Algorithms

4.3.3.Backpropagation

4.3.4.Regularization Techniques

4.4.Deep Learning Architectures

4.4.1.Convolutional Neural Networks (CNNs)

4.4.2.Recurrent Neural Networks (RNNs)

4.4.3.Autoencoders

4.5.Advanced Deep Learning Models

4.5.1.Generative Adversarial Networks (GANs)

4.5.2.Transformer Models

4.5.3.Capsule Networks

4.6.Model Evaluation and Tuning

4.6.1.Evaluation Metrics

4.6.2.Hyperparameter Tuning

4.6.3.Model Interpretability and Explainability

4.7.Deep Learning in Production

4.7.1.Deployment of Deep Learning Models

4.7.2.Model Optimization for Production

4.7.3.Monitoring and Maintenance of Models

4.7.4.Ethics and Responsible AI

5.Natural Language Processing (NLP)

Understand how computers can comprehend, interpret, and generate human language, with applications in sentiment analysis and chatbots.

5.1.Introduction to NLP

- 5.1.1.What is NLP?
- 5.1.2.History of NLP
- 5.1.3.Key NLP Terminologies

5.2.Text Preprocessing

- 5.2.1.Basic Text Processing Techniques
- 5.2.2.Text Normalization
- 5.2.3.Part of Speech (POS) Tagging

5.3.Text Encoding and Feature Extraction

- 5.3.1.Bag of Words (BoW) and TF-IDF
- 5.3.2.Word Embeddings
- 5.3.3.Advanced Embeddings

5.4.Traditional NLP Algorithms

- 5.4.1.Naive Bayes for Text Classification
- 5.4.2.Support Vector Machines (SVMs)
- 5.4.3.K-Nearest Neighbors (KNN) and Decision Trees

5.5.Advanced NLP Models

- 5.5.1.Recurrent Neural Networks (RNNs)
- 5.5.2.Attention Mechanisms and Transformers
- 5.5.3.Pre-trained Language Models

5.6.NLP Tasks and Applications

- 5.6.1.Text Classification
- 5.6.2.Named Entity Recognition (NER)
- 5.6.3.Machine Translation
- 5.6.4.Text Summarization
- 5.6.5.Question Answering (QA) Systems
- 5.6.6.Conversational AI and Chatbots

5.7.NLP Evaluation and Metrics

- 5.7.1.Common NLP Evaluation Metrics
- 5.7.2.Human Evaluation for NLP Models

6.Computer Vision for Image & Video Analysis

Learn to enable machines to "see" and interpret visual information, crucial for facial recognition and autonomous systems.

6.1.Introduction to Computer Vision

6.1.1.Overview of Computer Vision

6.1.2.Image Formation and Representation

6.2.Image Processing Basics

6.2.1.Fundamental Operations

6.2.2.Filtering and Image Enhancement

6.2.3.Histograms and Contrast Adjustment

6.3.Feature Detection and Extraction

6.3.1.Keypoint Detection

6.3.2.Feature Descriptors

6.3.3.Feature Matching

6.4.Object Detection and Recognition

6.4.1.Classical Object Detection Methods

6.4.2.Deep Learning-Based Detection

6.4.3.Face Detection and Recognition

6.5.Image Segmentation

6.5.1.Types of Segmentation

6.5.2.Advanced Segmentation Techniques

6.6.3D Computer Vision

6.6.1.Depth Estimation

6.6.2.3D Reconstruction

6.6.3.Object Tracking in 3D Space

6.7.Advanced Topics in Computer Vision

6.7.1.Generative Models in Computer Vision

6.7.2.Action and Pose Recognition

6.7.3.Self-Supervised and Transfer Learning in Vision

6.8.Computer Vision in Production

6.8.1.Model Deployment

6.8.2.Optimization for Production

6.8.3.Ethics and Privacy in Computer Vision

7.AI Development on Azure AI & Google AI

Gain hands-on experience deploying and managing AI solutions on leading cloud platforms.

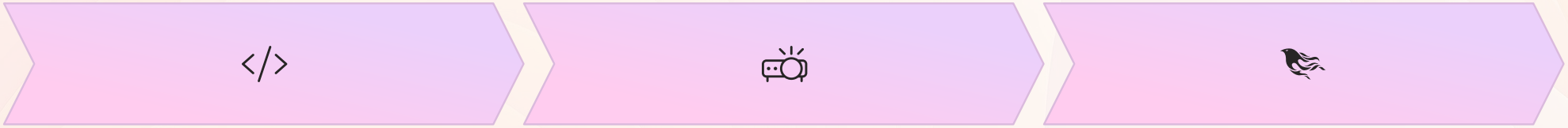
Transforming Industries with AI

Artificial Intelligence and Machine Learning are not just theoretical concepts; they are powerful tools actively transforming various industries. Understanding their real-world impact is crucial for aspiring AI professionals. This course provides insights into how these technologies are being applied across different sectors.

- **Healthcare:** Accelerating drug discovery, improving diagnostics, and personalising treatment plans.
- **Finance:** Enhancing fraud detection, algorithmic trading, and customer service through chatbots.
- **Automotive:** Powering autonomous vehicles and improving safety features.
- **Retail:** Personalising customer experiences, optimising supply chains, and predicting consumer trends.

Hands-On Projects and Practical Experience

Theoretical knowledge is fundamental, but practical application is where true mastery is achieved. Our AI & ML training course places a strong emphasis on hands-on learning, ensuring you gain the confidence and skills needed to tackle real-world challenges.



Coding Exercises

Work through practical coding challenges using Python, the leading language for AI development.

Live Project Work

Apply your learning to a series of simulated real-world projects, building a robust portfolio.

Framework Proficiency

Gain experience with industry-standard AI and ML frameworks like TensorFlow and PyTorch.

These practical components are designed to bridge the gap between classroom learning and industry demands, preparing you for immediate impact.

Flexible Online Learning

We understand the demands of a busy professional life, which is why the Artificial Intelligence and Machine Learning Training Course is delivered through flexible online sessions. Our commitment is to provide an engaging and effective learning experience that fits seamlessly into your schedule.

- **Interactive Sessions:** Participate in live discussions and Q&A sessions with instructors.
- **Accessible Content:** Access course materials, recordings, and assignments at your convenience.
- **Global Community:** Connect with fellow learners from around the world, fostering a diverse learning environment.

Our online platform is equipped with all the necessary tools to ensure a rich and interactive learning experience, replicating the benefits of in-person training with the added advantage of flexibility.

Industry-Recognised Certification

Upon successful completion of the Artificial Intelligence and Machine Learning Training Course, you will receive an industry-recognised certification from Ecorporate Trainings. This certification serves as a testament to your acquired expertise and commitment to professional development in the AI field.

> **"Certification from Ecorporate Trainings validates your skills and enhances your professional credibility in the competitive tech market."**

This credential will significantly boost your CV, opening doors to new career opportunities and demonstrating your readiness to contribute to AI-driven projects. It's a valuable asset that will distinguish you in the eyes of employers.

Enrol Today and Shape Your Future

The Artificial Intelligence and Machine Learning Training Course . This is your chance to equip yourself with the skills that will define the next generation of technology. Don't miss this opportunity to advance your career and become a leader in the exciting world of AI.

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