Faysal Aziz

Artificial Intelligence

Transition to Tomorrow's Tech

FA-0109 · 5-Day

Data & Analytics

Introduction

5-Day Training

In today's rapidly evolving technological landscape, Artificial Intelligence (AI) stands as a cornerstone. From reshaping industries to redefining user experiences, AI's transformative potential is unquestionable. This 5-day training session promises an in-depth exploration of AI's vast domain, delivered by industry veterans who have significantly contributed to pioneering AI products in the defense sector. With a rich blend of theoretical knowledge and practical exercises, participants will delve into AI's history, its contemporary applications, and get a glimpse of its promising future.

Learning outcomes

By the conclusion of this training, participants will:

- Chart the historical trajectory of AI, acknowledging key milestones.
- Decode fundamental AI and ML terminologies.
- Appreciate the pivotal role of data, cluster computing, and big data in AI advancements.
- Differentiate between a myriad of machine learning techniques and their real-world applications.
- Design and deploy rudimentary AI systems using Python.
- Understand AI's transformative implications in various industries, with a focus on the future of the job market.

Prerequisites

- A foundational grasp of programming concepts (recommended but not mandatory).

- Some familiarity with Python, though not mandatory, will be beneficial.
- A zeal for learning and curiosity about AI's potential.

Training outline

1. Day 1: Introduction and Foundations

Welcome & Introduction

- Ice-breaking session
- Setting expectations and objectives

History and Evolution of AI

- From Turing to Deep Blue to AlphaGo: Major milestones

Basic Terminologies in AI and ML

- Key concepts: Algorithms, Neural Networks, Training Data, etc.

AI in the Modern World

- Practical demonstrations of everyday AI applications
- Discussion: AI's most transformative uses in the last decade

- Hands-on: Setting up Python & necessary tools for AI development

2. Day 2: Diving into Data

The Lifeblood of AI: Data

- Types of data: Quantitative vs Qualitative, Time series, etc.
- Data Collection methods and tools

Data Cleaning and Pre-processing

- Outliers, Missing Data, Normalization
- Hands-on: Cleaning a sample dataset using Python

Basics of Databases and Data Warehouses

- SQL and NoSQL databases
- Hands-on: Querying databases using SQL

Big Data and AI

- Hadoop and Spark basics
- Hands-on: Setting up a basic Spark environment and processing data

3. Day 3: Cluster Computing & Advanced Data Techniques

Basics of Parallel Processing & Cluster Computing

- Benefits and challenges

Role of Cluster Computing in Big Data

- Introduction to tools: Kubernetes, Docker
- Hands-on: Setting up a basic Kubernetes cluster

Data Streaming and Real-Time Processing

- Kafka, Storm: Overview and usage
- Hands-on: Building a simple real-time data streaming application

Deep Dive: Defense Industry's Use of Cluster Computing

- Case studies and insights

4. Day 4: Exploring Machine Learning & Building Models

ML Fundamentals

- Dive into Supervised and Unsupervised Learning
- Popular algorithms: Decision Trees, SVM, Clustering
- Hands-on: Training a simple model using a supervised algorithm in Python

Deep Learning Basics

- Neural Networks, Activation functions
- Introduction to platforms: TensorFlow, PyTorch
- Hands-on: Building a basic Neural Network for image recognition

Model Evaluation

- Understanding Precision, Recall, ROC, AUC
- Hands-on: Evaluating the models built earlier

5. Day 5: Advanced AI Techniques & Ethics

Natural Language Processing

- Tokenization, Named Entity Recognition, Sentiment Analysis
- Hands-on: Building a basic sentiment analysis tool

Computer Vision

- Convolutional Neural Networks, Image Processing techniques
- Hands-on: Image classification using CNNs

AI Ethics

- Discussing real-world cases of AI bias and implications

- Ethical considerations in defense AI: Autonomous weapons, decision-making algorithms

Closing Session

- Recap and insights from trainers' industry experience
- Predictions for AI's future: Opportunities and challenges
- Q&A and Feedback session

This training promises not just a glimpse into AI's capabilities but also hands-on experience, ensuring participants are well-equipped to harness its potential. Drawing from the rich experiences of our trainers, who have been at the helm of cutting-edge AI advancements, we aim to inspire, educate, and empower our participants. There will be hand-crafted guidance from the trainers to ensure that the trainees benefit to the maximum.

© 2026 Faysal Aziz · Kuala Lumpur