

# **Capstone Projects:**

Real Time Business Scenario using Artificial Intelligence



### **Sales Prediction System**

Use AI regression and time-series models to forecast future sales and identify seasonal trends for better business planning.



### **Customer Segmentation**

Apply clustering algorithms like K-Means to group customers by behavior, demographics, or purchase history for targeted marketing.



### **Fraud Detection System**

Build an AI model to detect unusual patterns in financial transactions and prevent fraudulent activities.



### **Chatbot for Customer Support**

Develop an Al-powered chatbot using NLP to answer FAQs, handle queries, and escalate complex issues.



### **Sentiment Analysis Tool**

Use NLP to analyze customer reviews or social media posts and classify sentiments as positive, negative, or neutral.



#### **Recommendation System**

Implement AI to recommend products, movies, or services based on user preferences and past interactions.

# **ARTIFICIAL INTELLIGENCE COURSE SYLLABUS**

### **Section 1: Introduction to Al**

- What is Artificial Intelligence
- Types of Al
- Perceptron
- Multi-Layer Perception
- Markov Decision Process
- Logical Agent & First Order Logic
- AL Applications

# Section 2: Artificial Intelligence Fundamentals

- Application of Al
- History of Al
- Machine Learning
- Fuzzy Logic
- Expert Systems
- Computer Vision

# Section 3: Reinforcement Learining And Q - Learning **Intuition**

- Q-Learning Introduction
- Reinforcement Learning Concepts
- Marcov Decision Process
- Adding a "Living Penalty"
- Temporal Difference
- Q-Learning Visualization

# Section 4: Deep Q - Learninig Intuition

- Plan of Attack
- Deep Q-Learning Intuition Learning

- Experience Replay
- **Action Selection Policies**

# **Section 5 : Creating Environment**

- Installation of environment for Self Driving Car
- Building Al
- Playing with Al
- Challenge Solutions

# Section 6: Deep Conventional Q - Learning Intuition

- Plan of Attack
- Deep Conventional Q-Learning Intuition
- Eligibility Trace

# Section 7: Artificial Intelligence And their Technologies

- Human Factors and Evaluation
- Information Retrieval & Visualisation
- Language & Learning Technology
- Vision / Image Processing

# Section 8: Robotics And Artificial Intelligence

- Write DAX in plain language
- Get best practice tips
- Explain context/iterators
- Auto-create time formulas

#### Section 9 : Performance Metrics

- Key Methods for Performance Metrics
- Confusion Matrix Example
- Terms of Confusion Matrix
- Accuracy
- Recall / Sensitivity

### **Section 10: Neural Networks**

- Introduction Error, Cost & Loss Functions
- Challenges in Gradient
- Gradient Descent
- Techniques to overcome challenges of Mini Batch
- Convolution Layer and Max-Pooling
- Hands-on use cases using RNN, LSTM and GRU

# **SKILLS AND TOOLS**

# **Tools Covered**

Python

TensorFlow

**PyTorch** 

R

Keras











Scikit-learn

Google Cloud Al

**AWS SageMaker** 

Jupyter Notebook

OpenCV











**MATLAB** 

Colab

Azure Al







# **Skills Covered**

Predictive Modeling



Machine Learning & Deep Learning



Natural Language Processing (NLP)



Computer Vision



Data Analysis & Preprocessing



Model Training & **Evaluation** 



Al Ethics & Bias Mitigation



Algorithm Design



# Earn your Artificial Intelligence **Course Completion Certificate**

Credo Systemz's certificate is highly recognized by 30K Global companies around the world.



# WHAT OUR TRAINEE SAYS?



#### Santhosh

 $4.7 \times \times \times \times$ 

I joined Artificial Intelligence training at Credo Systemz. The trainer explained complex concepts in a simple way. Hands-on projects and assignments made learning effective. Best place to start Al journey.



#### Fathima Banu



The Artificial Intelligence course was very informative and practical. I gained strong skills in ML, Python, and AI algorithms. Credo Systemz provided excellent support throughout the training. Highly recommended institute.



### **Prakash Jain**

 $5.0 \times \times \times \times \times$ 

Amazing Gen Al training at Credo Systemz! The trainer shared real-time examples and projects that helped me apply concepts easily. Assignments were useful for revision. One of the best institutes for AI.



#### Saindhavi



I learned Gen AI at Credo Systemz and really enjoyed it. The trainer explained topics clearly and encouraged coding practice. Real-world projects made me confident to implement Artificial Intelligence solutions practically.



### Jesuraj. F



Best institute for Artificial Intelligence! The trainer explained AI algorithms step by step. Real-time projects and daily tasks made learning smooth. Credo Systemz truly prepares students for industry requirements.



### Anjali Ravi



I had a wonderful experience at Credo Systemz. The Gen AI course was structured well, starting from basics to advanced. The trainer supported with examples, projects, and doubt clearance sessions effectively.

# **CHENNAI**

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