TS
TECH TEACH
EDUCATIONAL SOLUTIO

Machine Learning

OUR MISSION :

"Our mission is to empower learners worldwide through innovative technology, personalized learning experiences, and accessible educational resources. We strive to cultivate a community where every individual can achieve their full potential, regardless of their background or circumstances."

OUR VALUES :

"To pioneer the future of education by leveraging cutting-edge technology to make learning more engaging, effective, and inclusive. We envision a world where education transcends boundaries, creating opportunities for lifelong learning and fostering a society enriched by knowledge and creativity."

COURSE CURRICULUM:

Week 1: Introduction and Basics

- Day 1-2: Introduction to Machine Learning
  - Overview of machine learning and its applications
  - Types of machine learning: Supervised, Unsupervised, and Reinforcement Learning
- Day 3-4: Python for Machine Learning
  - Python basics: Data types, control structures, functions
  - Libraries: NumPy, Pandas, Matplotlib
- Day 5: Linear Algebra and Statistics Refresher
  - Vectors, matrices, and operations
  - Probability and basic statistics concepts

COURSE CURRICULUM:

Week 2: Data Preprocessing and Exploration

- Day 6-7: Data Collection and Cleaning
  - Handling missing values
  - Data normalization and scaling
- Day 8-9: Exploratory Data Analysis (EDA)
  - Data visualization techniques
  - Descriptive statistics
- Day 10: Feature Engineering
  - Creating new features
  - Feature selection techniques

COURSE CURRICULUM:

Week 3: Supervised Learning Algorithms

- Day 11-12: Regression Algorithms
  - Linear Regression
  - Polynomial Regression
- Day 13-14: Classification Algorithms
  - Logistic Regression
  - k-Nearest Neighbors (k-NN)
  - Decision Trees
- Day 15: Model Evaluation
  - Metrics: Accuracy, Precision, Recall, F1-Score
  - Cross-validation

COURSE CURRICULUM:

Week 4: Advanced Supervised Learning

- Day 16-17: Ensemble Methods
  - Bagging and Boosting
  - Random Forest
  - Gradient Boosting Machines (GBM)
- Day 18-19: Support Vector Machines (SVM)
  - Theory and implementation
- Day 20: Neural Networks Basics
  - Introduction to neural networks
  - Simple neural network with TensorFlow/Keras

COURSE CURRICULUM:

Week 5: Unsupervised Learning Algorithms

- Day 21-22: Clustering Algorithms
  - k-Means Clustering
  - Hierarchical Clustering
- Day 23-24: Dimensionality Reduction
  - Principal Component Analysis (PCA)
  - t-Distributed Stochastic Neighbor Embedding (t-SNE)
- Day 25: Association Rule Learning
  - Apriori algorithm
  - Market Basket Analysis

COURSE CURRICULUM:

Week 6: Deep Learning and Natural Language Processing

- Day 26-27: Advanced Neural Networks
  - Convolutional Neural Networks (CNNs)
  - Recurrent Neural Networks (RNNs)
- Day 28-29: Natural Language Processing (NLP)
  - Text preprocessing
  - Sentiment analysis
- Day 30: Introduction to Reinforcement Learning
  - Basics of RL
  - Simple RL algorithms

COURSE CURRICULUM:

Week 7: Project Work and Case Studies

- Day 31-33: Project Planning and Dataset Selection
  - Define project goals
  - Select and understand the dataset
- Day 34-36: Model Development
  - Implement chosen models
  - Perform EDA and preprocessing
- Day 37: Model Evaluation and Optimization
  - Evaluate model performance
  - Tune hyperparameters

COURSE CURRICULUM:

Week 8: Finalizing Project and Presentation

- Day 38-40: Final Model Refinement
  - Optimize and finalize the model
  - Prepare the final results
- Day 41-42: Project Report Writing
  - Document the methodology, results, and conclusions
- Day 43-44: Presentation Preparation
  - Prepare slides and practice the presentation
- Day 45: Final Presentation and Feedback
  - Present the project to peers/mentors
  - Receive feedback and discuss improvements

Our Partners Company's

FOR SUPPORT

+91 9652379012

www.techteachedsols.com

tech.ed.sols@gmail.com

THANK YOU

www.techteachedsols.com