TS
TECH TEACH
EDUCATIONAL SOLUTIO

Data science

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 to Data Science

- Day 1-2: Overview of Data Science
  - Definition and importance of Data Science.
  - Applications and career opportunities in Data Science.
- Day 3-4: Tools and Environment Setup
  - Introduction to Jupyter Notebook, Anaconda, and Python environment setup.
  - Overview of popular Data Science libraries (NumPy, pandas, matplotlib, scikit-learn).
- Day 5: Basic Python Programming
  - Python basics: data types, variables, control structures, functions.

COURSE CURRICULUM:

Week 2: Data Analysis and Visualization

- Day 1-2: Data Manipulation with pandas
  - Loading and inspecting data.
  - Data cleaning and preprocessing.
- Day 3-4: Data Visualization with matplotlib and seaborn
  - Creating various types of plots (line, bar, histogram, scatter).
  - Customizing and interpreting plots.
- Day 5: Exploratory Data Analysis (EDA)
  - Techniques for exploring data.
  - Identifying patterns, trends, and outliers.

COURSE CURRICULUM:

Week 3: Statistics and Probability

- Day 1-2: Descriptive Statistics
  - Measures of central tendency (mean, median, mode).
  - Measures of dispersion (variance, standard deviation).
- Day 3-4: Probability Concepts
  - Basic probability, conditional probability, Bayes' theorem.
  - Probability distributions (normal, binomial, Poisson).
- Day 5: Inferential Statistics
  - Hypothesis testing, confidence intervals.
  - p-values, t-tests, chi-square tests.

COURSE CURRICULUM:

Week 4: Data Wrangling and Feature Engineering

- Day 1-2: Data Wrangling Techniques
  - Handling missing data, duplicates.
  - Data transformation, scaling, and normalization.
- Day 3-4: Feature Engineering
  - Creating new features, encoding categorical variables.
  - Feature selection and extraction.
- Day 5: Practical Data Wrangling
  - Hands-on project involving data cleaning and feature engineering.

COURSE CURRICULUM:

Week 5: Introduction to Machine Learning

- Day 1-2: Machine Learning Basics
  - Supervised vs. unsupervised learning.
  - Overview of machine learning workflow.
- Day 3-4: Supervised Learning Algorithms
  - Linear regression, logistic regression.
  - Decision trees, random forests.
- Day 5: Model Evaluation and Validation
  - Cross-validation, confusion matrix, ROC curve, precision, recall.

COURSE CURRICULUM:

Week 6: Advanced Machine Learning

- Day 1-2: Unsupervised Learning Algorithms
  - Clustering (K-means, hierarchical).
  - Dimensionality reduction (PCA).
- Day 3-4: Introduction to Deep Learning
  - Basics of neural networks.
  - Overview of popular frameworks (TensorFlow, Keras).
- Day 5: Practical Machine Learning Project
  - Hands-on project involving supervised and unsupervised learning techniques.

COURSE CURRICULUM:

Week 7: Natural Language Processing (NLP) and Time Series Analysis

- Day 1-2: Introduction to NLP
  - Text preprocessing, tokenization, stop-word removal.
  - Sentiment analysis, text classification.
- Day 3-4: Time Series Analysis
  - Components of time series data.
  - Time series forecasting with ARIMA, seasonal decomposition.
- Day 5: Practical NLP and Time Series Project
  - Hands-on project involving NLP and time series forecasting.

COURSE CURRICULUM:

Week 8: Final Project and Presentations

- Day 1-4: Final Project Development
  - Students work on a comprehensive final project that integrates multiple aspects of the curriculum.
- Day 5: Project Presentation and Evaluation
  - Students present their projects.
  - Feedback and evaluation.

Our Partners Company's

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THANK YOU

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