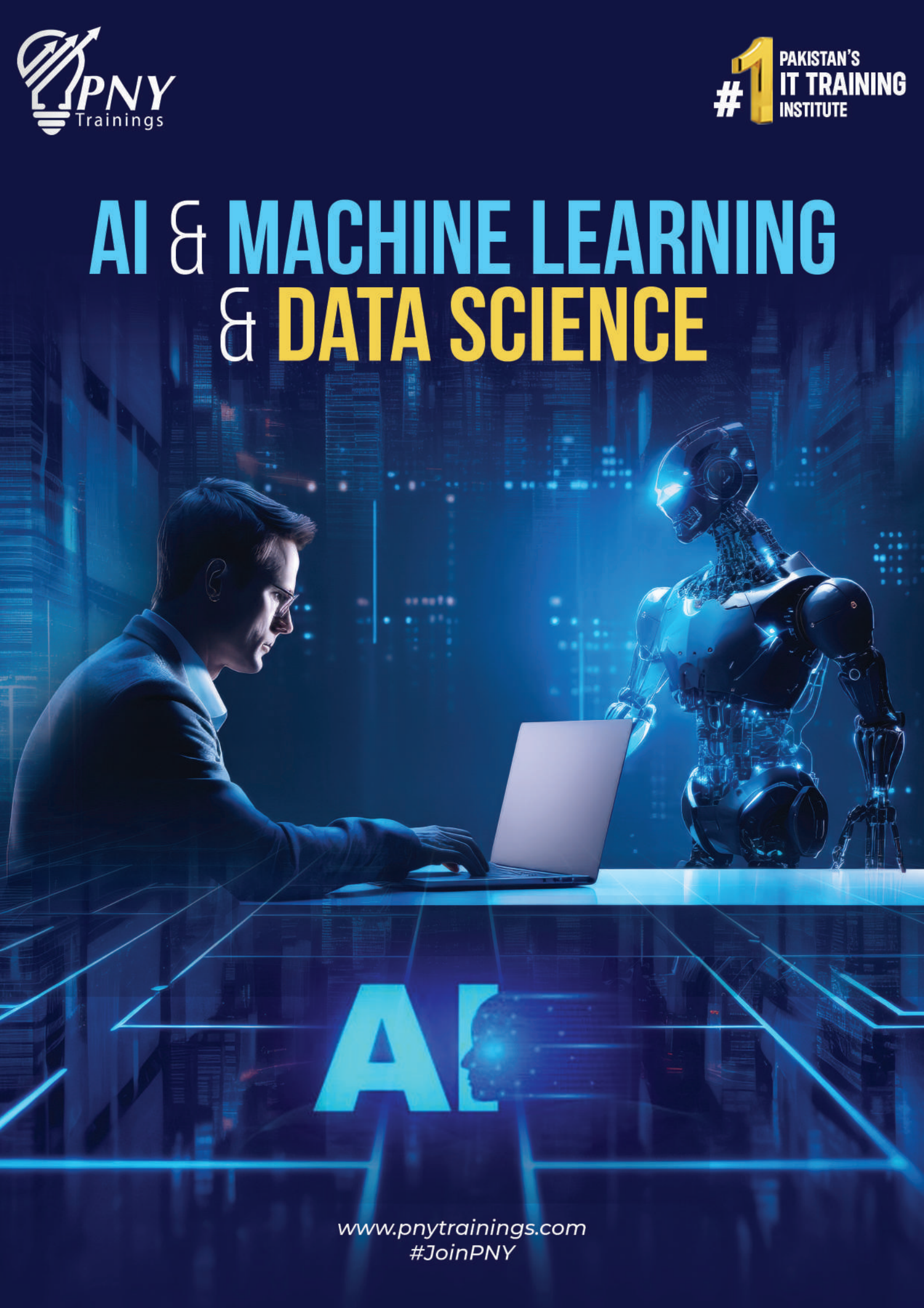
PNY Trainings

#1 PAKISTAN'S IT TRAINING INSTITUTE

AI & MACHINE LEARNING & DATA SCIENCE



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#JoinPNY

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ABOUT US

PNY Trainings is the first choice of students who want to excel themself in the field of Internet Marketing. PNY Trainings consists of Top Level Trainers who are adept in the fields of Internet Marketing. We are the pioneer institute who started comprehensive Trainings for the benefits of students. Since our launch, hundreds of students are trained who secured good jobs in the expanding IT industry as we all know. Contact us and secure your seat for upcoming trainings, events and seminars.

100 K+ ALUMNI	**100+** PROFESSIONAL PROGRAMS	**200+** INSTRUCTORS	**100+** MOUs SIGNED

WHY US ?

- 10+ Years of Excellence
- Experienced Trainers
- Jobs Placement Cell
- Practice-Based Learning
- Career Oriented Learning
- Industry Connectivity

WE OFFER

- Development
- Marketing
- Art & Design
- Multimedia
- Networking & Cyber Security
- Business & Accounts
- Languages

SALIENT FEATURES

PNY Trainings

Follow-Up Sessions

Practical learning

Internships/Jobs Opportunities

Learning Management System

Expert Mentorship

WHY THIS COURSE ?

- The most alluring factor of Python is that anyone aspiring to learn this language can learn it easily and quickly. When compared to other data science languages like R, Python promotes a shorter learning curve and scores over others by promoting an easy-to-understand syntax.
- Newer data scientists gravitate toward Python because of its ease of use, which makes it accessible.

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#1 PAKISTAN'S IT TRAINING INSTITUTE

AI TOOLS

INCLUDED IN COURSE OUTLINE

01 TENSORFLOW

02 CHATGPT (OPENAI API)

03 GEMINI

04 PYTORCH

05 KERAS

06 XGBOOST

07 NLTK

08 HUGGING FACE

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what you will learn:

- Problem solving skills using Python
- Programming fundamentals with python
- Object Oriented Programming Concepts and implementation in Python
- Become a Data Analyst, we will work on pandas, numpy to acquire skills to become data analyst
- Become a Data Visualization Engineer, real hands-on-practice on data visualization tools, seaborn, matplotlib and Tableau
- Become a Machine Learning Expert, acquire proper background and hands-on real projects to become one
- Become Deep Learning Ninja,learn how to built your own neural networks with application to computer vision
- Big Data Engineer, Get hands-on big data giant Hadoop
- Spark Developer, Learn state of the art big data processing platform spark using Python

Tools and Languages:

Learning Outcomes

Thirty (30) plus real-world scenario based assignments
Five (5) plus hands-on-experience to industry biased projects
Live Coding Sessions
Both Online/Physcial Modes
Interview Q & A Sessions
Job-oriented guidance

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PYTHON FOR ARTIFICIAL INTELLIGENCE

LECTURE 1: WHAT IS DATA SCIENCE?

- Different aspects of data science
- Popular data science techniques
- Tools and Language Introduction
- Careers in Data Science, Analytics and Engineering

Assignment # 1: Explore different data science platforms, i.e Kaggle

LECTURE 2: PYTHON CRASH COURSE

- Variables and data types
- Operators and Conditional statements
- Sequences and Iterations
- Functions
- Object Oriented Programming

Assignment # 2: Make a multiplayer tic-tac toe game

Project # 1: Scrap a website.

LECTURE 3: NUMPY: PYTHON FOR DATA ANALYSIS

- Numpy Arrays
- Indexing & Operations
- Numpy for Image Processing

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Assignment # 3: Computer Vision with Numpy

LECTURE 4: PANDAS: PYTHON FOR DATA ANALYSIS

- DataFrames
- Indexing and Selection
- Handling missing data
- Concatenation and merging
- Grouping, Data I/O

Assignment # 4: Credit card fraud detection analysis

LECTURE 5: MATPLOTLIB: PYTHON FOR DATA VISUALIZATIONS

- Plots and Subplots
- Bar Graphs, Histograms, ScatterPlots and PiePlots
- Plotting Categorical variables
- Working with styling to the graphs

Assignment # 5: Dataset visualizations

LECTURE 6: SEABORN: PYTHON FOR DATA VISUALIZATIONS

- Plots and Subplots
- Bar Graphs, Histograms, ScatterPlots and PiePlots
- Plotting Categorical variables
- Working with styling to the graphs

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Assignment # 6: Dataset visualizations
Project # 2: Data Capstone Project

LECTURE 7: MACHINE LEARNING: PART I - REGRESSION

- Introduction to machine learning
- Over fitting vs under fitting
- Linear Regression
- Cross Validation and Bias-Variance Tradeoff
- Hands-on-Practice: House Pricing Prediction

Assignment # 7: Currency Forecasting

LECTURE 8: MACHINE LEARNING: PART II - CLASSIFICATION

- Logistic Regression
- K Nearest Neighbors
- Hands on Practice: Titanic Disaster Learning

Assignment # 8: Fraud Detection

LECTURE 9: MACHINE LEARNING: PART III - CLASSIFICATION

- Decision Trees and Random Forests
- Support Vector Machines
- Hands on Practice: Covid19 Analysis

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Assignment # 9: Cancer Detection through Machine Learning

LECTURE 10: MACHINE LEARNING: PART IV

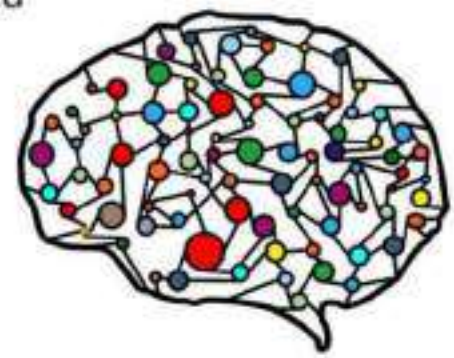
- Unsupervised machine learning
- KMeans Clustering Algorithm
- Hands on Practice: Customer Segmentation

Assignment # 10: Customizations to Customer Segmentation

Project # 3: Machine Learning Capstone Project

LECTURE 11: NATURAL LANGUAGE PROCESSING PART I

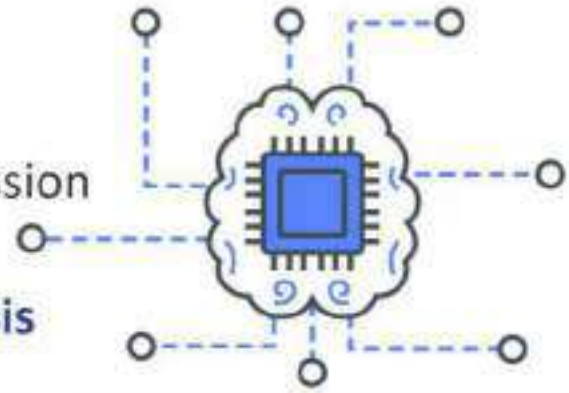
- Built own spam detector - Description of data
- Naive Bayes Concept
- Spam detection
- Hand on Practice: Spam Classifier



Assignment # 8: Fraud Detection

LECTURE 12: NATURAL LANGUAGE PROCESSING PART II

- Sentimental Analyzer
- Tokenization and Token to vectors
- Sentimental Analysis using Logistic Regression



Assignment # 12: Twitter Sentiment Analysis

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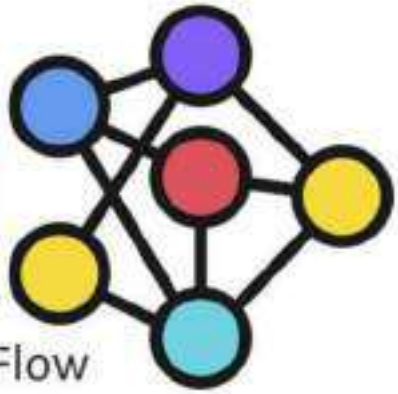
LECTURE 13: NATURAL LANGUAGE PROCESSING PART II

- Sentimental Analyzer and Tokenization
- Token to vectors
- Sentimental Analysis using Logistic Regression

Assignment # 13: Twitter Sentiment Analysis

LECTURE 14: DEEP LEARNING - ARTIFICIAL NEURAL NETWORKS

- Neuron and activation functions
- Neural networks learning and working
- Gradient Descent and Backpropagation



LECTURE 15: DEEP LEARNING - BUILDING AN ANN

- Problem Description
- Hands on Practice: Building an ANN using TensorFlow

Assignment # 15: Speech Recognition Using ANN

LECTURE 16: DEEP LEARNING - BUILDING AN CNN

- Relu Layer, Pooling and Flattening
- Hands on Practice: Building a CNN

Assignment # 16: Face Recognition using CNN

Project # 4: AI Project

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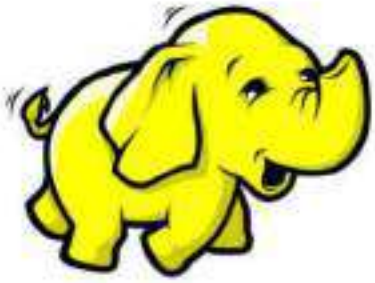
LECTURE 17: HADOOP SETUP AND BASICS

- Installation of Hadoop and machine dependencies
- Hadoop Ecosystem
- HDFS and how it works



LECTURE 18: HADOOP MAPREDUCE

- Map-Reduce, what is and how it works
- How mapreduce distributed processing
- Hands-on-practice: Map-reduce using Java

Assignment # MapReduce

LECTURE 19: APACHE SPARK GETTING STARTED

- Why Spark
- Spark installation Standalone
- Spark installation on AWS EC2
- Spark EcoSystem

LECTURE 20: SPARK BASICS AND RDD

- Resilient Distributed Datasets
- Program Structure with Python
- Actions and Transformations
- Hands-on-Practice: Spark Core Using Python

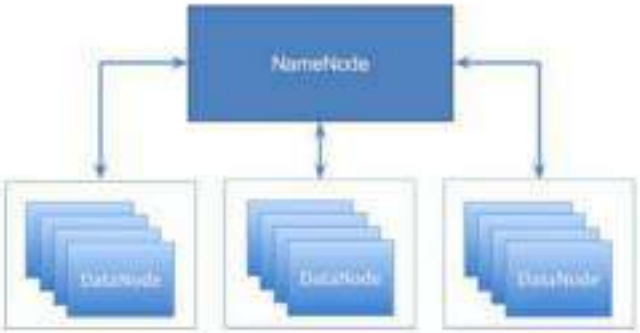
LECTURE 21: APACHE SPARK SQL, DATAFRAMES AND DATASETS

- Spark SQL
- DataFrames vs RDD's
- Data Sources
- Hands-on-Practice: Spark SQL Using Python

Assignment # 1 Spark

LECTURE 22: APACHE SPARK ON HADOOP CLUSTER

- Spark setup on Cluster
- Monitoring and Configuration
- Partitioning and Troubleshooting



Assignment # 2 Spark

LECTURE 23: APACHE SPARK MACHINE LEARNING

- Spark MLLiB
- Classification and Regression
- Hands-on-Practice: Big Data Predictions

Assignment # 3 Spark

LECTURE 24: APACHE SPARK STREAMING, GRAPHX

- Spark Streaming

- Structured Streaming in Spark
- GraphX
- Hands-on-Practice: Twitter Spark Streaming

Assignment # 4 Spark

LECTURE 25: HADOOP : HIVE

- Data Types, Creating databases and reading data from source
- CRUD
- Order By, Group By and Joins
- Hands-on-Practice: Movies Dataset Analysis with hive

Assignment # Hive

LECTURE 26: HADOOP : NO-RELATIONAL DATA STORES

- NoSql, HBase, Cassandra and MongoDB
- Hands-on-Practice: Sentimental Analysis

Assignment # No-Relational Database

LECTURE 27: HADOOP : CLUSTER MANAGEMENT

- Yarn, Tez, Mesos, Zookeeper and Zeppelin

Assignment # Cluster Management

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LECTURE 28: HADOOP : FEEDING DATA TO CLUSTER

- Kafka and Flume
- Hands-on-Practice: Setting up Messaging System

Assignment # Flume

LECTURE 29: HADOOP: ANALYZING STREAMS OF DATA

- Apache Storm and Flink
- Hands-on-Practice: Sentimental Analysis

LECTURE 30: TABLEAU

- Installation, Charts, Time-Series and Filters
- Maps and Scatterplots

LECTURE 31: TABLEAU

- Dashboards, Joining, Blending & Relationships

Assignment # 1 Tableau

LECTURE 32: TABLEAU - ADVANCED

- Clusters, Custom Territories and Design Features

Assignment # 2 Tableau

Course Project # 2: Big Data

Course Project # 3: Data Science + Big Data

Usman Anwar

(Machine Learning, Big Data, Full stack Python)

A MASTERS DEGREE HOLDER IN DATA SCIENCE FROM THE NATIONAL UNIVERSITY OF COMPUTER AND EMERGING SCIENCES(FAST-NU) LAHORE. THE RECIPIENT OF THE SILVER MEDAL FOR EXCEPTIONAL ACADEMIC RECORD AND ALSO THE WINNER OF THE PRIME MINISTER SCHOLARSHIP. A RESEARCH SCIENTIST IN FINANCIAL FORECASTING AND CURRENCY SEGMENTATION PROBLEMS. AN EXPERT IN MACHINE LEARNING WITH HANDS ON EXPERIENCE IN PYTHON, SCIKIT-LEARN, PYSPARK, TENSORFLOW, AND HADOOP. HAVING 5+ YEARS OF EXPERIENCE IN SOLVING REAL WORLD PROBLEMS IN BOTH INDUSTRIAL AND ACADEMIC DEMANDS. BUILDING BOTH REGRESSION AND CLASSIFICATION BASED MACHINE/ DEEP LEARNING MODELS, HYPERPARAMETER TUNING, ACCURACY IMPROVEMENT I.E LSTMS, ANN AND CNNS BOTH IN PYTHON AND SPARK CONTEXTS. A HELPING INSTRUCTOR & FACILITATOR IN FINDING RIGHT MACHINE LEARNING MODEL FOR YOUR DATA, OPTIMIZING THE PARAMETERS TO FIND MODEL TUNNING AND TO EVALUATE THE MODEL BY GETTING HIGHER COMPARATIVE ACCURACY.

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Pakistan's No. 01 IT Training Institute

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PRESIDENTIAL AWARD WINNER 2023

100 K+	100+	200+	100+
ALUMNI	PROFESSIONAL PROGRAMS	INSTRUCTORS	MOUs SIGNED

Our Strength:

- International Collaborations
- Awarded by USA Education 2.0
- Multiple Branches in Pakistan
- Affiliated with Govt.(PSDA & PBTE)

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- Johar Town Branch: 1st Floor 256 / A, Block R2 Near Shaukat Khanum Hospital, next to Standard Chartered Bank, Lahore, Pakistan
- Iqbal Town Branch: 743-B Kashmir Block Allama Iqbal Town Lahore, Pakistan
- Shahdara Branch: Office#1, Floor#2, Al-Habib Bank, Phool Mandi, Al Saeed Chowk Saggian, Bypass Lahore-Jaranwala Rd, Lahore, Pakistan
- Rawalpindi Branch: Talha Heights Plot # 21-D, 6th Road, Satellite Town Rawalpindi, Pakistan
- Multan Branch: 237-B, Model Town, Main Boulevard, Multan, Pakistan
- Sargodha Branch: Mawk Tech Space, 2nd Floor Ahsan Cash & Carry, near zafar ullah chowk Sargodha
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