



ALL PAKISTAN MEMON FEDERATION I.T. COMMITTEE



PROUDLY ANNOUNCE

Certified *Python Pro*

Conquer Web Application,
Databases & Data Analytics

Preparation Of **International Python Certification**
Has Been Included In This Course.

All students in this course will get a **FREE HEALTH CARD** (for one person)

*T & C Applied

COURSE OUTLINE

Week 01 to 04: Introduction to Python Programming

➤ Introduction to Python:

- Basics of Python syntax
- Data types and variables
- Control flow (if statements, loops)

➤ Functions and Modules:

- Defining and calling functions
- Understanding modules and importing
- Built-in functions and standard libraries

➤ Data Structures:

- Lists, tuples, and dictionaries
- Sets and their operations
- Working with the collections module

➤ File Handling and Advanced Concepts:

- Reading and writing files
- Exception handling
- Object-oriented programming (classes, inheritance)

Week 05 to 08: Databases - MYSQL and MongoDB

➤ Introduction to Databases and SQL:

- Understanding databases and their importance
- Introduction to SQL: querying, joins, subqueries

➤ MYSQL:

- Setting up MYSQL database
- CRUD operations in MYSQL
- Working with multiple tables and joins

➤ MongoDB:

- Introduction to MongoDB
- CRUD operations in MongoDB
- Schema design and querying

➤ Advanced Database Concepts:

- Indexing and optimization
- Transactions and concurrency control
- Backup and recovery strategies

Week 09 to 12: Web Development with Python using Django, LinkedIn Profile Optimization, and GitHub

➤ Introduction to Web Development:

- Basics of client-server architecture
- Introduction to Django framework

➤ Building Web Applications with Django:

- Setting up Django project
- Creating models, views, and templates
- URL routing and request handling

➤ Working with APIs:

- Introduction to RESTful APIs
- Building API endpoints in Django
- Consuming external APIs

➤ Advanced Topics in Web Development:

- Authentication and authorization
- Deploying Django applications
- Performance optimization and caching

COURSE OUTLINE

Week 13 to 16: SQL and Database Management

➤ Intermediate SQL:

- Advanced querying techniques
- Data manipulation statements (INSERT, UPDATE, DELETE)
- Stored procedures and triggers

➤ Database Administration:

- Database security and user management
- Performance tuning and optimization
- Backup and recovery strategies

➤ Introduction to Statistics:

- Descriptive statistics
- Probability distributions
- Hypothesis testing

➤ Statistical Analysis in Python:

- Data analysis with NumPy and pandas
- Data visualization with Matplotlib and Seaborn

Week 17 to 20: Data Science Libraries & Machine Learning

➤ Data Manipulation with pandas:

- Data cleaning and preprocessing
- Grouping and aggregating data

➤ Data Visualization with Matplotlib and Seaborn:

- Creating various types of plots
- Customizing plot aesthetics

➤ Introduction to Machine Learning:

- Supervised and unsupervised learning
- Model evaluation and selection

➤ Machine Learning Algorithms:

- Regression, classification, clustering algorithms
- Model training and evaluation

Week 21 to 24: Advanced Machine Learning & Deep Learning:

➤ Advanced Machine Learning Techniques:

- Ensemble learning methods
- Dimensionality reduction techniques

➤ Introduction to Deep Learning:

- Neural network architecture
- Training neural networks

➤ Deep Learning with TensorFlow and Keras:

- Implementing deep learning models
- Convolutional and recurrent neural networks

➤ Advanced Deep Learning Techniques:

- Transfer learning
- Hyperparameter tuning
- Model deployment and productionization

JOIN OUR

Certified Python Pro

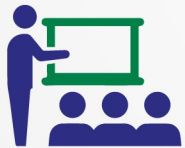
Conquer Web Application,
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COURSE DURATION:
24 WEEKS



COURSE HOURS:
96 HOURS



HANDS ON
TRAINING



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