

DIGITAL CERTIFIED AI EXPERT

# Introduction To AI & Python

Course Outline



# Introduction

**Digital Software Market (DSM)** is a distinguished entity within the **Information Technology sector**, with a notable legacy spanning over two decades since its **establishment in 1998**. **Headquartered in Abu Dhabi, UAE, DSM** has established itself as a global leader, **specializing in diverse facets of IT, including Artificial Intelligence (AI), Software Design and Development, and software licensing**. Under the stewardship of our esteemed IT executive, Waleed Ajmal, DSM is proud to extend its operations to Pakistan.

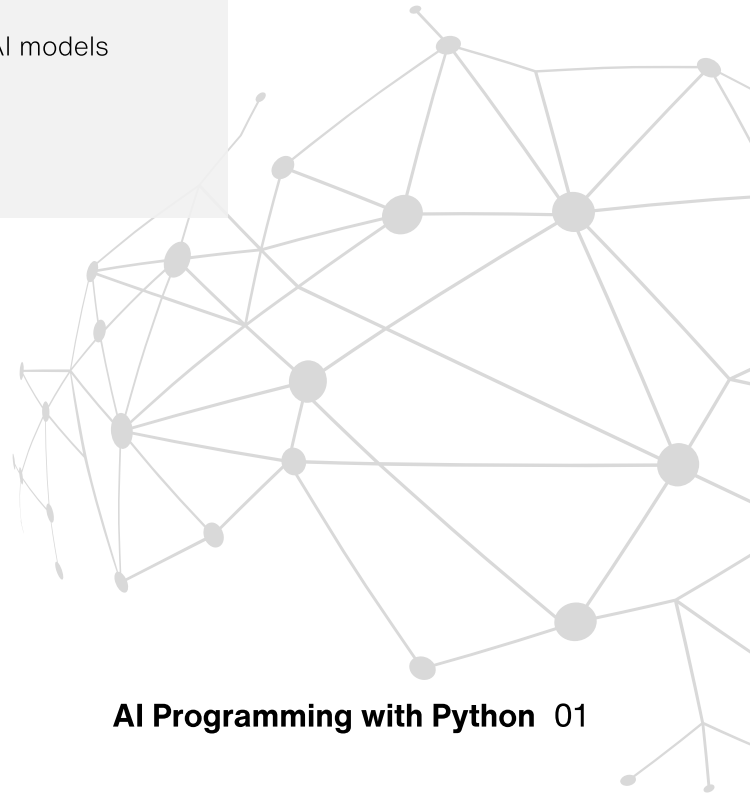
Start using AI techniques and developing skills related to programming, Large language models, MultiModals, and Natural Language Processing



## Learning Objectives

### A student of this program will be able to: -

- Utilize programming tools like Python, LMS, and NLP
- Creating AI Modles, Using AI Models, Deploying AI models
- Deploying a real world working AI app



# Program Information

**DSM** is committed to providing one of the **best AI learning experiences in Pakistan**, prioritizing the safety and security of our students.



## Estimated Time

3 months at 10hrs/week\*



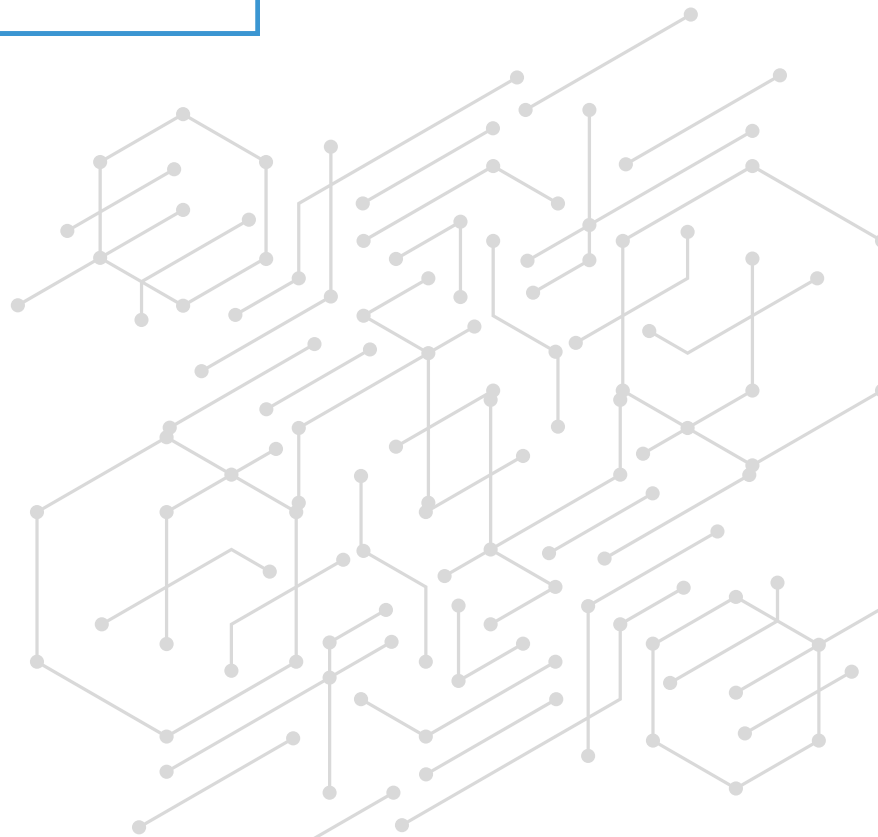
## Skill Level

Beginner to Advanced



## Location

The course will be conducted at **Quickoffice 29 -D, Main Blvd Gulberg, Lahore**, ensuring a conducive environment for learning.



Course 1

# Introduction to Python

Start coding with Python, drawing upon libraries and automation scripts to solve complex problems quickly.

## Lesson 1

### **PYTHON SYNTAX**

- Comments
  - Variables and Data Types
  - Keywords
  - Identifiers
- 

## Lesson 2

### **Control Flow**

- Conditional Statements (if, elif, else)
  - Loops (for, while)
  - Break and Continue statements
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## Lesson 3

### **Basic Operators**

- Arithmetic Operators
  - Comparison (Relational) Operators
  - Assignment Operators
  - Logical Operators
  - Bitwise Operators
- 

## Lesson 4

### **Data Structures**

- Lists
  - Tuples
  - Dictionaries
  - Sets
- 

## Lesson 5

### **Functions**

- Defining Functions
- Parameters and Arguments
- Return Statement
- Scope and Lifetime of Variables
- Lambda Functions

# Introduction to Python

Start coding with Python, drawing upon libraries and automation scripts to solve complex problems quickly.

## Lesson 6

### Modules and Packages

- Importing Modules
- Creating Modules
- Packages

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## Lesson 7

### File Handling

- Reading from Files
- Writing to Files
- Working with File Objects
- File Modes

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## Lesson 8

### Exceptions Handling

- try...except block
  - Handling Multiple Exceptions
  - try...except...else block
  - try...except...finally block
-

Course 2

# Introduction to AI

Explore AI from Introduction to NLP, covering text preprocessing, model construction for sentiment analysis, text classification.

## Lesson 1

### What Is AI?

- Definition of Artificial Intelligence (AI)
- History of AI
- importance and applications of AI in various fields.

## Lesson 2

### NLP

- Using/building NLP models for tasks such as sentiment analysis, text classification, and named entity recognition
- Implementing sequence-to-sequence models for tasks like machine translation and text summarization.

## Lesson 3

### Multimodal

- AI playground intro to gemini and multi modal approach
- vision models like Gemini, Bard, ChatGPT, and more for multimodal applications
- prompt engineering

## Lesson 4

### AI Playground

- Introduction to Gemini
- Hands-on projects and exercises to reinforce learning
- Guidance on developing AI applications from scratch
- Exploration of AI project ideas and real-world applications

## Lesson 5

### Deploying AI

- Learning the intricacies of deploying AI models into production
- Understanding different deployment strategies and platforms
- Exploring best practices for maintaining and updating deployed AI systems

## Lesson 5

### Ethics of AI

- Ethical considerations in AI development and deployment
- Bias and fairness in AI systems
- Responsible AI practices and guidelines

# Meet your Instructors

Instructors will consist of both in-person and international educators who will teach students through online platforms. Students have the option to enroll in additional online classes. If students require further assistance, they can easily reach out to our additional support services.



## **Muhammad ASIF ALI**

23 years of experience of teaching Computer

### **LinkedIn Profile**

(<https://pk.linkedin.com/in/muhammad-asif-10ab4b93>)

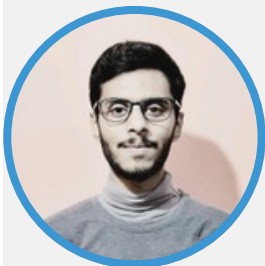


## **Waleed Ajmal**

Over 5 years of experience as an AI engineer, pioneering in the latest technologies.

### **LinkedIn Profile**

(<https://pk.linkedin.com/in/waleed-ajmal>)



## **Waleed Ajmal**

Founder/CEO LEXA

### **LinkedIn Profile**

(<https://www.linkedin.com/in/rabeet-ali-6535571b2/>)

# Meet our Cheif Guests

welcoming our esteemed chief guests, eminent leaders from the realm of big tech enterprises and visionary minds aspiring to helm as CEOs. Their presence adds profound insight and inspiration to our gathering. We are honored to host such distinguished luminaries among us.



**Saad Tahseen Moid Al Hashmi**

Founder/CEO Digital Software Market



**Stephen M. Stegner**

Director of EMC at Microsoft





# Value

Our certification program goes beyond traditional education by partnering with leading IT giants to offer students a comprehensive learning experience in AI. All students will be provided a Professional Completion Certificate. By completing this program, students not only enhance their profiles but also gain hands-on experience through the development of their own AI projects. These projects serve as valuable assets, positioning students for leadership roles in prominent IT companies even before entering the professional realm.



## Real-World Project Creation

Students will create real-world projects, enhancing practical skills and problem-solving abilities.



## Assessments and CEO Advice Session

Students will undergo assessments and receive advice from industry CEOs, gaining valuable insights for their careers.



## Python Proficiency

Students will learn Python, equipping them with essential coding skills for diverse projects.



## Professional Certification and Showcase

Students will receive professional certificates, showcasing their expertise to potential employers.



## AI/ML Experience

Students will explore AI/ML concepts, gaining insight into cutting-edge technologies.



## Production-Ready App Development

Students will learn app development for production environments, mastering processes and best practices.

Moreover, **our program** isn't just about acquiring knowledge; it's a collaborative journey with students. It challenges them to grapple with new concepts and technologies, fostering a **deeper understanding of AI** beyond the surface level. Whether students seek to delve deeply into AI or simply desire a basic understanding, our program accommodates all levels of interest.

**Each student will deploy their own AI project**, ensuring practical application of learned concepts. This inclusive approach welcomes students from various backgrounds, including those solely interested in **basic AI tools**. Through our program, students gain invaluable learning experiences and exposure to cutting-edge AI technologies, empowering them to thrive in today's dynamic tech landscape.

# Digital Certified Professional

This course is an integral component of the Digital Certified AI Professional certification program offered by DSM. Upon completion of the two-month course, an examination will be administered to ensure that students have successfully covered the content. Those who achieve a score of over 70% will be awarded the Professional Certificate of DSM AI Fundamentals and DSM Python Fundamentals. However, if a student fails to meet this threshold, they will only receive a Certification of Participation.

It's worth noting that students will also receive a professional certificate for their end-of-course app submission, which will be evaluated based on a judging rubric.

To become a **Digital Certified AI Professional**, students are required to obtain certifications. However, only *two of these certifications will be offered in this summer camp:*

- **DSM AI Fundamentals**
- **DSM Python Fundamentals**

***Other certifications included in the program are:***

- DSM Holistic Programming
- DSM Cybersecurity Essentials
- DSM IT Fundamentals
- DSM Multi-modal Expert
- DSM AI Advanced

Student can appear in *external examination* at any time to obtain the title of **"Digital Certified AI Professional"**

# Next step and logistics

To ensure the best experience for our students, there is a small fee associated with the course. This fee is not profit-driven but rather aimed at covering the costs of providing high-quality education.

## The fee structure is as follows:

- **\$75 USD per student** if fewer than 30 students enroll.
- A **20% discount** will be applied if more than 30 students enroll, resulting in a fee of \$60 USD per student.

*Please sign and return the proposal to **IT Executive Waleed Ajmal** to confirm your enrollment. We look forward to embarking on this learning journey with you.*

For any questions please consult **it@aljashtesting.com**

# Terms & Conditions

By signing the following form you accept to the following terms

1. I understand that participation in the course provided by DSM is voluntary and that DSM reserves the right to modify or cancel the course at any time.
2. I agree to abide by all rules, regulations, and instructions provided by DSM and the course instructors throughout the duration of the course.
3. I acknowledge that the content provided in the course materials is the intellectual property of DSM and may not be reproduced, distributed, or shared without prior written consent.
4. I consent to DSM collecting and processing personal data provided by me for the purpose of administering the course and communicating with me about course-related matters.
5. I understand that DSM may use photographs, videos, or other recordings taken during the course for promotional or educational purposes and I consent to the use of my likeness therein.
6. I agree to conduct myself in a professional and respectful manner towards fellow participants, instructors, and staff members of DSM throughout the duration of the course.
7. I acknowledge that DSM assumes no liability for any injuries, accidents, or damages that may occur during the course and I release DSM from any and all claims arising from my participation.
8. I certify that all information provided by me on this form is true and accurate to the best of my knowledge.

**Preferred Dates** month1

**Admin Name** \_\_\_\_\_

month2

**Signature** \_\_\_\_\_

**Remarks** \_\_\_\_\_

**Date** \_\_\_\_\_