# Cultivating AI Excellence

# Brochure Summer'24 Cohort



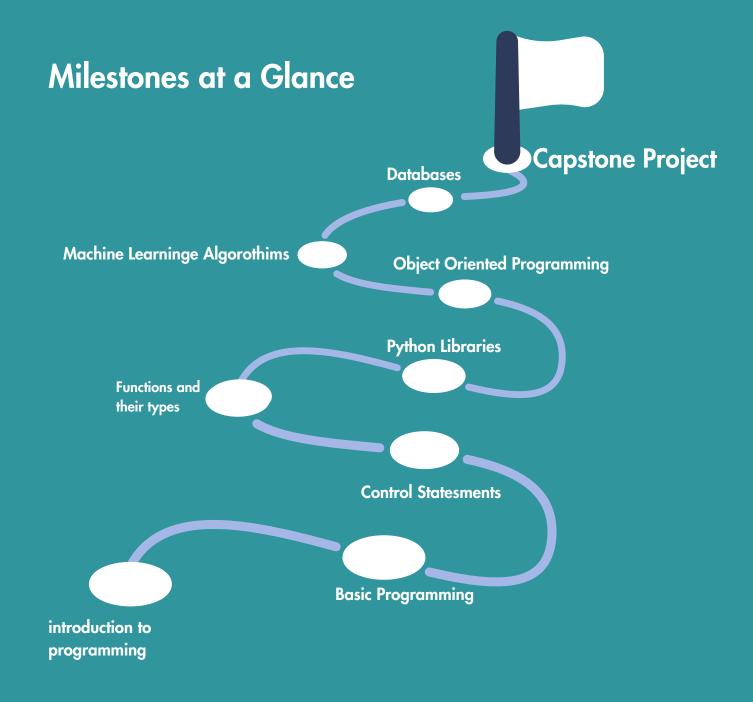
## Data Analytics Using Python





#### **Unlock the Power of Data Science!**

Data Analytics using Python combines programming and data manipulation to derive insights from data.





### Introduction to Programming

#### START Starting the Journey: Why Learn to Program?

Discover how programming serves as a gateway to solving real-world problems. Learn why Python is the chosen language for data scientists worldwide.



- The Canvas: The Computer: More than just hardware; it's your canvas for creating solutions.
- **The Language:** Programming Languages: From human thoughts to machine operations.
- The Tool: Why Python? Simplified syntax, vast community, and an ocean of libraries.



#### **Basic Programming**

**Building Foundations: Mastering Python Basics** Master the fundamentals that form the backbone of any software application.



- Key Markers Data Toolkit: Variables and Data Types: Your toolkit for data manipulation.
  - **Python Grammar:** Operators and Expressions: The grammar of Python.
  - Data Structures: Organizing data with Lists, Tuples, Dictionaries, and Sets.

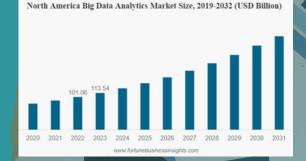


#### **Control Statements**

**Steering the Code: Control Flow Mastery** Control the flow of your programs using logical structures.



- **Decision Tree**: Decision-Making: Crafting the decision tree.
- Flow Navigation: Flow Control: Navigating through the code.
- Automation: Loops: Doing more with less; automate repetitive tasks.



### Industry

Data Science, Web, Prompt engineering

#### Job Roles

Python Developer, Web Developer, Prompt Engineer





Key Markers

#### **Functions and Their Types**

Modular Mastery: Efficient Programming

Learn to write reusable pieces of code that make programming more efficient and organized.

- Building Blocks: Functions: The building blocks for reusable code.
- Customization: Parameters and Arguments: Customize how functions behave.
- Recursive Solutions: Recursion: Solving problems by solving smaller instances of the same problem.



#### **Python Libraries**

**Toolset Expansion: Harnessing Python's Power** Unleash the power of Python's data libraries to handle, analyze, and visualize data.



- File Handling: Managing data files. Numerical Computing: NumPy: The
- cornerstone for numerical computing. • Data Manipulation: Pandas: Data manipulation at your fingertips.
- Data Visualization: Matplotlib & Seaborn: Painting data in visual form.

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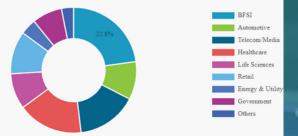
#### **Object-Oriented Programming**

#### **Complex Systems:**

Dive into the OOP paradigm to manage more complex data systems with ease.

- Key Markers. Classes and Objects: The nuts and bolts of OOP.
  - Inheritance: Streamlining code through hierarchical arrangements.

Global Big Data Analytics Market Share, By Vertical, 2023



### Industry

**BFSI**, Healthcare,

### **Job Roles**

Data Scientist, Business analyst, Tech Consultant

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Key Markers

#### An Introduction to Machine Learning

#### **Understanding Machine Learning:**

Discussion on the general concept of machine learning.

- Value of ML: Uncovering patterns and insights from data.
- **Real-World Applications:** Predictive analytics, recommendation systems, and anomaly detection.
- Bridging the Gap: Preparing and preprocessing data for machine learning.
- Building on Current Skills: Utilizing Python skills for basic ML tasks.
- Next Steps: Overview of techniques and applications, detailed exploration in advanced courses.

#### Databases

**Data Management: Introduction to Databases** Learn how to use SQL for database management and data manipulation.

- SQL Fundamentals: Basic commands and queries.
- Data Organization: Structuring and normalizing data in databases.

#### Industry-Grade Projects

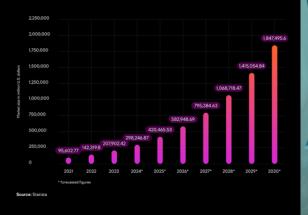
**Real-World Experience: Hands-On Projects** Engage in industry-grade projects that provide real-world experience and practical skills.

Key Markers

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- **Project Scope:** Projects tailored to the interests of the candidate.
- Industry Relevance: Gain experience in solving real industry challenges.

#### Al Global Market Size 2021 – 2030



#### Industry

BFSI , Healthcare, Digital Marketing, Sales

### Job Roles

Data Scientist, Business analyst, Tech Consultant



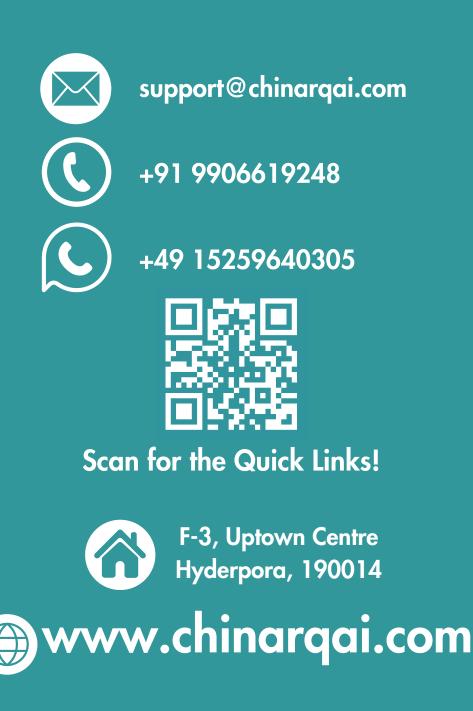
#### Key Markers





#### Become Part of the CQAI Community!

Ready to transform your career or business with AI? Dive into the future with Chinar Quantum AI's innovative training programs. By joining us, you'll gain access to live interactive sessions led by industry experts, hands-on projects that tackle real-world challenges, and a vibrant community of like-minded individuals. Whether you're aiming to enhance your technical skills, lead AI-driven initiatives, or simply stay ahead in the rapidly evolving tech landscape, CQAI provides the tools and support you need. Don't just learn—innovate, grow, and lead with CQAI. Start your journey today!



# Chinar Quantum Al

In the rich cultural tapestry of Kashmir, Allama Iqbal immortalized the spirit of the land through the metaphorical 'Aatish-e-Chinar' (the fire of chinar), drawing inspiration from the grand chinar trees that stand as silent guardians of the region's legacy. These ancient chinars, deeply rooted in centuries of resilience, not only provide sanctuary from the blazing summer sun but also transform the valley into a canvas of vivid colors during the enchanting autumn season. As modern challenges in science and technology loom large, the indomitable spirit of the chinar serves as a guiding light for Kashmir's inaugural venture into artificial intelligence and quantum technology - Chinar Quantum AI (CQAI). Unyielding in the face of adversity, CQAI endeavours to redefine the boundaries of possibility, cultivating a workforce not only for the local AI industry but with global ambitions. The poetic declaration, 'At CQAI, the Aatish-e-Chinar entangles with the quantum potential of Al,' encapsulates the very essence of CQAI's mission – a future as dynamic as the autumnal chinar leaves, deeply rooted in fundamental research and mathematics, poised to empower the AI industry on an international scale. Just as the chinar tree finds its place in timeless folk narratives, CQAI aspires to carve a niche in the global tech landscape, where tradition converges with innovation, and strength harmonizes with cutting-edge advancements. In this convergence, CQAI envisions a future where the flame of 'Aatish-e-Chinar' illuminates the path toward unparalleled excellence in the world of artificial intelligence.

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