



# PYTHON & DATA ANALYTICS WITH GENERATIVE AI

Get the skills to get ahead, stay relevant and earn more

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Reviews 2,500+ • Excellent



**14000+**  
STUDENTS  
TRUST US



## About INCAPP

INCAPP Coding Institute, established in 2011, was founded with the goal of addressing the global tech skills shortage. Our commitment lies in offering high-quality training programs to students, professionals, and organizations. We strive to empower individuals with coding skills, facilitating personal and professional growth, and assisting organizations in enhancing their workforce's productivity and effectiveness.

Our company boasts a team of seasoned instructors, experts in their fields. We employ the latest teaching methodologies and technologies to provide engaging and interactive training programs.

“

We foster innovation and empower aspiring coders. As founders, we are excited to welcome you aboard. Whether you're new to coding or already experienced, our hands-on curriculum and expert instructors will guide you. Coding is more than just writing lines; it involves creativity and problem-solving. Embrace challenges and celebrate your successes, knowing that coding is a journey of continuous growth. Let's get started!

”



**RAHUL CHAUHAN**  
Co-Founder & Instructor

**PRAVEEN CHAUHAN**  
Co-Founder & Instructor

Oracle & Microsoft Certified



## How We Help You To Learn



Step

1

### Expert Instructors

Top-class instructors, experts in their fields, teach through practical training.

Step

2

### Assignments

Understand all concepts through well-structured assignments.

Step

3

### Doubt Resolutions

Dedicated assistance provided to clarify doubts, featuring two types of instructors: Class Instructor and Lab Instructor.

Step

4

### Projects

Gain a comprehensive understanding of the technology through project work, guided by your instructor.



# Why INCAPP Coding Institute

Students deserve the finest learning environment.  
At INCAPP, we guarantee a superior learning experience and  
personalized support to ensure your success.



Top-Notch  
Classroom with  
Expert Instructor



Comprehensive  
Study Materials



Continuous  
Feedback and  
Monitoring



Guaranteed  
Course  
Completion



Project-Based  
Learning



Course  
Completion  
Certification



Dedicated  
Support for  
Doubt Resolution



Placement  
Assistance



Individual  
Attention to  
Each Student



In-Class  
Assignment  
Sessions





## Trainers at INCAPP



### Expert in Advanced Technologies

Trainer having in depth knowledge and expertise in advanced technologies.



### Excellent explanation

Explains the concepts in easy and fun manner.



### Punctual and Disciplined

Values time with punctuality and disciplined scheduling.



### Simplifies Complex Concepts

Breaks down complex concepts into easy-to-understand lessons.



### Professional & Efficient

Efficient and focused without wasting students' valuable time.



### Certified in their fields

Certified in Python, Java, and other essential technologies skills.



### Years of Technical Experience

Years of practical experience in technical projects and training.



### Committed to student success

Guides students with personalized mentorship ensure students achieve their learning goals.



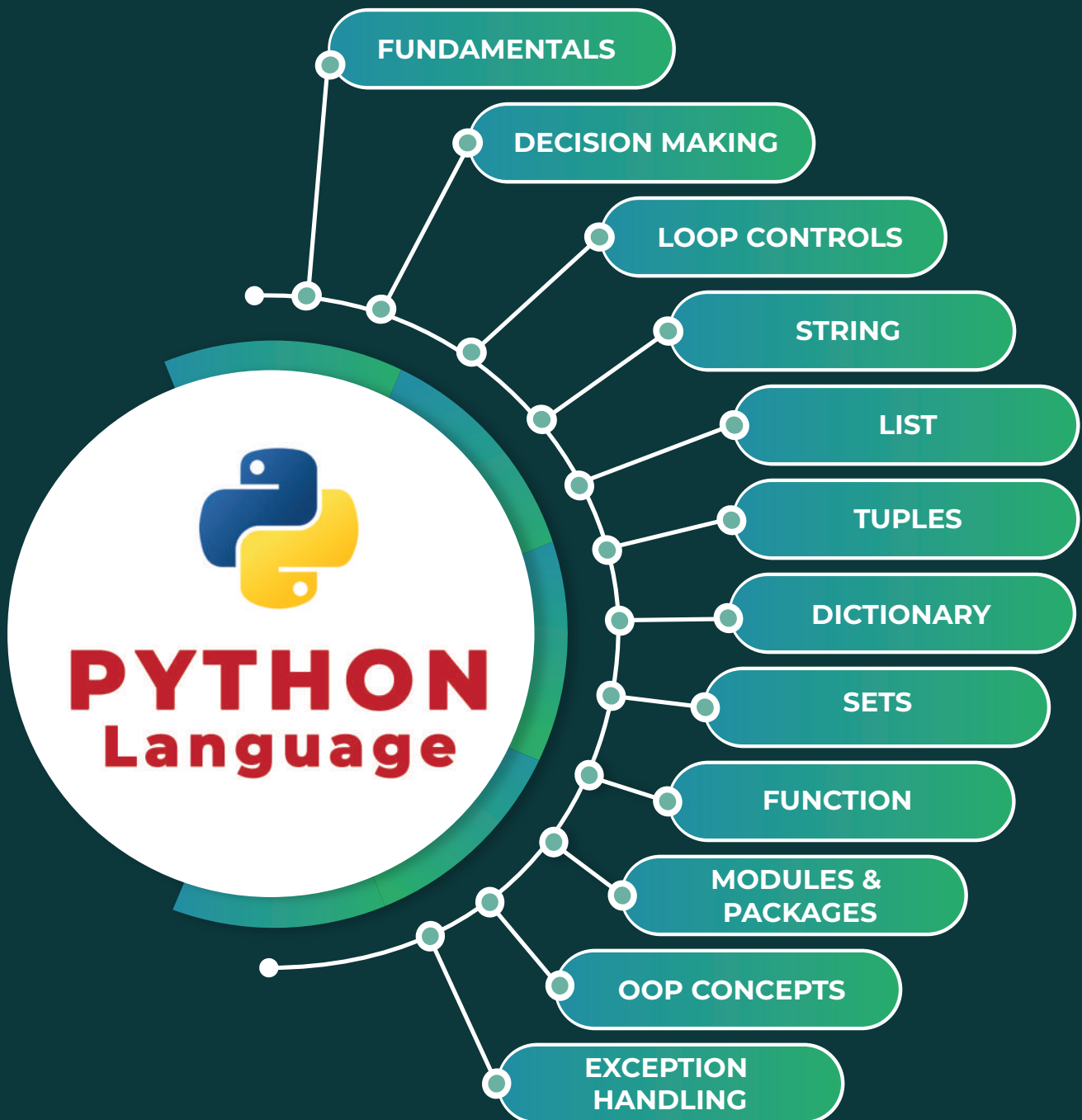
## The world's leading tech companies and startups hire our students



& many more



## What You Will Learn



PROJECT WORK

200+ ASSIGNMENTS



## What You Will Learn

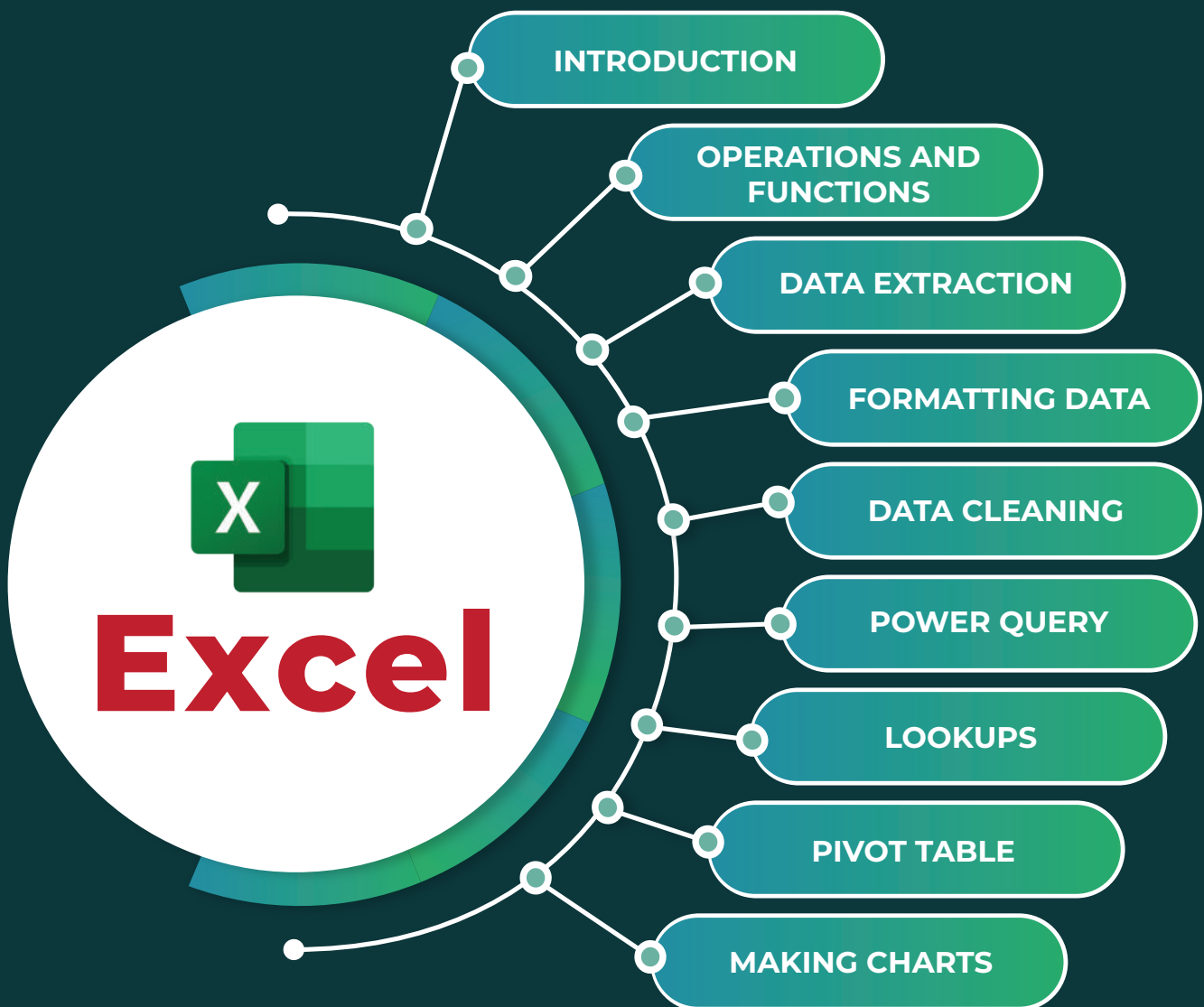


PROJECT WORK





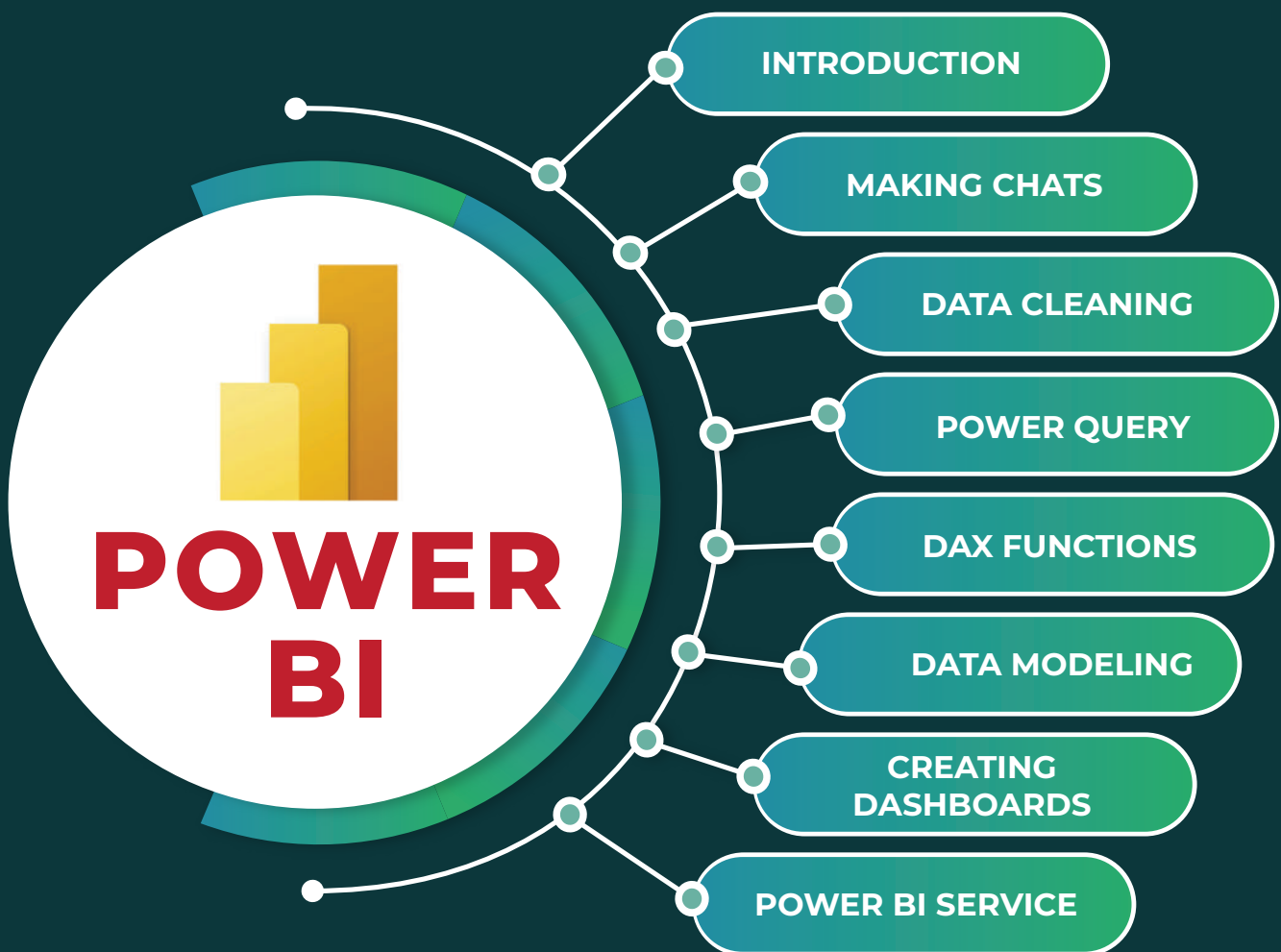
## What You Will Learn



**PROJECT WORK**



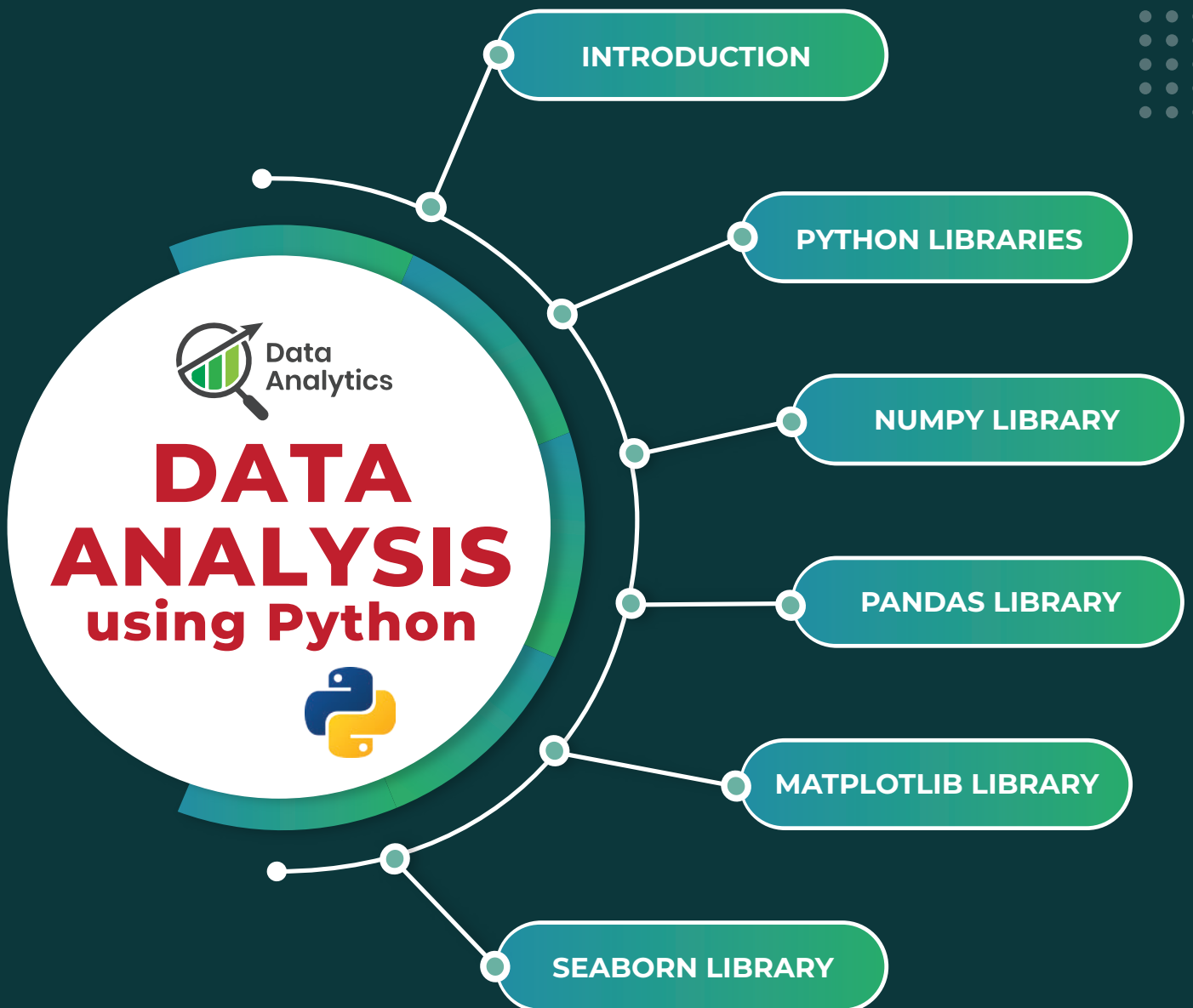
## What You Will Learn



PROJECT WORK



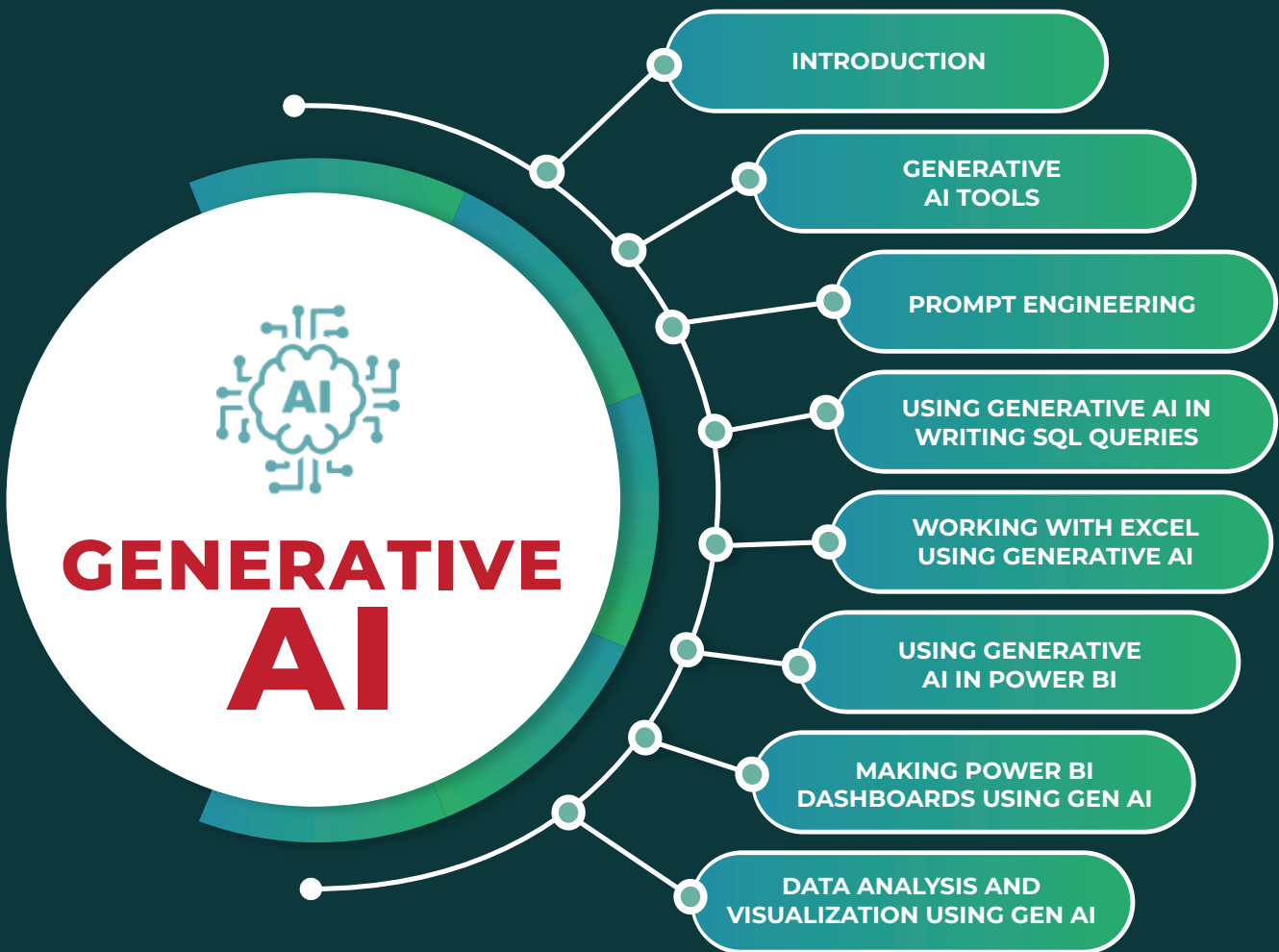
## What You Will Learn



**PROJECT WORK**



# What You Will Learn



PROJECT WORK



## 5 Reasons to learn Python & Data Analytics



**Ease of Learning:** Python's simple syntax makes it accessible for beginners.



**Wide Applicability:** Used in various fields like data analysis, web development, data science, AI and many more.



**High Demand in the Job Market:** Python skills are highly sought after in many tech industries.



**Versatility in Data Handling:** Python excels in handling various types of data, which is crucial for data analysis.



**Rich Libraries for Data Analysis:** Offers powerful libraries like Numpy, Pandas, Matplotlib and Seaborn for data analysis.





## Course Overview:

Python is a great and friendly language to use and learn. Python is a versatile, high-level programming language popular for its readability and vast ecosystem of libraries. Python is extensively used for data analysis, data science, machine learning, artificial intelligence, web development and many more due to its powerful libraries like NumPy, Pandas, Matplotlib, Seaborn, Scikit-learn, Tensor Flow, Django etc.

Data Analytics is the process of collecting raw data, organizing data, manipulating data, analyzing data and visualizing data to find meaningful and deep insights from data which can be then used to make right decisions about business. A data analyst will collect raw data, organize it and then analyze and visualize it to transform data into intelligible data.

Python is widely used for data analysis due to its powerful libraries like NumPy, Pandas, Matplotlib and Seaborn. Python simplifies the process of data manipulation, data processing, data analysis and data visualization which makes it a go-to language for data analysts to extract insights and make data-driven decisions. Its ease of use and comprehensive resources make Python a popular choice for both beginners and experts in the field of Data Analytics.

### Python



#### Introduction to Python

- History & Features of Python
- Versions of Python
- Applications of Python
- Scripting vs Programming Language
- Interactive Mode vs Script Mode
- Installing Python



- Writing First Python Program
- Executing First Python Program using Interactive Mode
- Executing First Python Program using Script Mode

#### Assignments

### Getting Started with Python

- Comments
- Keywords and Identifiers
- Data Types
- Variables
- print(), type(), id() Functions
- Operators
- Type Conversion Functions
- Receiving Input from Keyboard
- Working with input() Function

#### Assignments

### Python Operators

- Assignment Operator
- Arithmetic Operators
- Short-hand Operators
- Relational Operators
- Logical Operators
- Identity Operators
- Membership Operators
- Bitwise Operators

#### Assignments

### Decision Making Statements

- If Statement
- If - else Statement
- Elif Statement
- Nested Decision Making Statement

#### Assignments

### Loop Statements

- For Loop Statement
- While Loop Statement
- Break, continue and pass Statements
- Else with Loop Statement
- Nested Loops Statement

#### Assignments



## Python Collections Types

### Strings

- Creating Strings
- Strings Immutability
- Indexing and Slicing in Strings
- Formatting a String
- Functions on String
- String Operators
- String Methods

### Assignments

### List

- Creating Lists
- Generating List using range() Function
- List Mutability
- Functions on List
- List Operators
- Indexing and Slicing in List
- List Methods
- Pre-defined Type List
- User-defined Type List
- Converting String into List
- Converting List into String
- Nested Lists
- List Comprehension
- Using map() and filter() Functions on List

### Assignments

### Tuples

- Creating Tuple
- Generating Tuple using range() Function
- Functions on Tuple
- Tuple Operators
- Indexing and Slicing in Tuple
- Tuple Methods
- Nested Tuples
- Converting String and List to Tuple
- Converting Tuple to String and List

### Assignments



### Dictionary

- Creating Dictionary
- Dictionary Mutability
- Adding and Deleting Keys and Value Pairs
- Looping through Dictionary
- Extracting only Keys and only Values from Dictionary
- Creating Dictionary from List and Tuple
- Dictionary Comprehension

#### Assignments

### Set

- Creating a Set
- Normal and Frozen Set
- Creating and Modify Empty Set
- Add, Removing and Discarding elements to Set
- Converting String, List and Tuple to Set
- Converting Set into String, List and Tuple

#### Assignments

### Functions

- Defining a Function
- Calling a Function
- Types of Functions
- Formal and Actual Arguments
- Named and Keyword arguments
- Default and Positional Arguments
- \*args and \*\*kwargs Arguments
- Local and Global Variables
- Global Keyword
- Recursion and Recursive Function
- Anonymous Function

#### Assignments

### Modules and Packages

- Understanding Modules and Packages
- Creating a Module and Importing the Module
- Different ways of Importing Modules
- Working with Built-in Modules like math, sys, os, random, datetime etc.
- Creating a Package and Using the Package

#### Assignments



## Object Oriented Programming in Python

- Understanding Object Oriented Programming (OOP)
- Who created OOP's Concepts and Why?
- Learn all OOP's Concepts in real world
- Defining your Own Class
- Creating Object of the given Class
- Defining Variables and Methods inside a Class
- Instance Members
- Class Members

### Assignments

## Constructor & Destructor

- Introduction to Constructor
- Need of Constructor
- Defining Constructor
- Constructor with Default Arguments
- Introduction to Destructor
- Need of Destructor
- Defining Destructor

### Assignments

## Inheritance

- Understanding Inheritance
- Need of Inheritance
- Syntax of Inheritance
- Understanding Derived (child) and Base (parent) Classes
- Working of Constructor in Inheritance
- Types of Inheritance
- Data Hiding

### Assignments

## Polymorphism

- Understanding Polymorphism
- Need of Polymorphism
- Operator Overloading
- Method Overriding

### Assignments





### Abstraction

- Understanding Abstraction
- Need of Abstraction
- Achieving Abstraction
  - Abstract class
  - Abstract method

#### Assignments

### Encapsulation

- Understanding Encapsulation and Its Need
- Public, Private and Protected Access Specifiers
- Getter and Setter Methods
- Properties

#### Assignments

### Exception Handling

- Errors and Exceptions
- Exception Handling
- Try and Except Block
- Else block with Try and Except block
- Finally Block
- Raising an Exception
- Custom Exception

#### Assignments

### Project Work



## Data Analytics



### Introduction to Data Analytics

- What is Data Analytics?
- Why Data Analytics?
- Difference between Data Analytics and Data Science
- Applications of Data Analytics
- Scope of Data Analytics
- What is Data Collection?
- What is Data Cleaning?
- What is Data Analysis?
- Tools required for Data Analytics

### Data Analytics using SQL

- Understanding SQL and Databases
- Understanding MySQL
- Downloading and Installing MySQL
- What are DDL, DQL and DML Commands in SQL?
- SQL Commands: create database, create table
- SQL Constraints: not null, null, unique, primary key
- SQL Keys: Unique, Primary, Foreign, Composite and Candidate
- DDL Commands: create database, create table, create views, create index, create schema
- DML Commands: insert query, update query, delete query
- DQL Commands: select \*, select distinct queries, select where, order by, group by, having queries
- SQL Functions: count(), sum(), avg(), min() and max()
- Data and Time Functions in SQL
- Writing Conditional Queries
- Writing Subqueries in SQL
- SQL Joins: Inner Join, Left Join, Right Join, Full Join, Self Join, Cross Join
- Window Functions

### Project Work

### Data Analytics using Excel

- Understanding Excel
- Downloading and Installing Excel
- Operations and Functions in Excel
- Formatting in Excel
- Data Extraction in Excel
- Data Cleaning in Excel
- Handling Missing Values and Outliers
- LOOKUPS in Excel

- Pivot Table in Excel
- Data Analysis in Excel
- Making Charts in Excel
- Understanding Power Query
- Transforming Data in Power Query

#### Project Work

### Data Visualization using Power BI

- Understanding Power BI
- Downloading and Installing Power BI
- Basic Functionalities of Power BI
- Making Charts in Power BI
- Data Cleaning in Power BI
- Data Transformations using Power Query
- Advanced Power Query
- DAX Functions in Power BI
- Data Modelling
- Advanced DAX Functions in Power BI
- Visualizing Data using Power BI
- Making Reports and Dashboards in Power BI
- Understanding Power BI Service
- Using Power BI Service

#### Project Work

### Exploratory Data Analysis (EDA) using Python Libraries

- Introduction to Python Libraries for Exploratory Data Analysis (EDA)
- Introduction to Jupyter Notebook
- Downloading and Installing Anaconda
- Writing and Executing First Python Program in Jupyter Notebook
- Using Code Mode, Markdown Mode and Raw Mode of Jupyter Notebook

### Numpy Library

- What is Numpy Library?
- Understanding Need of Numpy Library
- What is a Numpy Array?
- Types of Numpy Arrays
- Creating Numpy Arrays
- Working with Numpy Array Properties
- Performing Scalar Operations on Numpy Arrays
- Performing Arithmetical Operations on Numpy Arrays
- Indexing and Slicing in Numpy Arrays
- Looping through in Numpy Arrays
- Understanding Difference between List and Numpy Array
- Mathematical Functions in Numpy Array
- Statistical Functions in Numpy Array

#### Project Work

### Pandas Library

- What are Pandas?
- Types of Pandas Data Structures
- Creating Series
- Creating DataFrame
- Indexing and Slicing in Series
- Indexing and Slicing in DataFrame
- Looping Through Series
- Looping Through DataFrame
- Adding New Rows and Columns in DataFrame
- Removing Existing Rows and Columns in DataFrame
- Finding Missing Values in DataFrame
- Replacing and Removing Missing Values in DataFrame
- Reading Data from CSV File into DataFrame
- Writing Data to CSV File from DataFrame
- Exploratory Data Analysis (EDA) using Pandas Library

#### Project Work

### Matplotlib Library

- What is Data Visualization?
- Understanding Need of Data Visualization
- What is Matplotlib?
- Plotting Line Plots using Matplotlib
- Plotting Bar Plots using Matplotlib
- Plotting Histograms using Matplotlib
- Plotting Pie Charts using Matplotlib
- Customizing Plots using Matplotlib

#### Project Work

### Seaborn Library

- What is the Seaborn Library?
- Comparison of Matplotlib and Seaborn Libraries
- Plotting Line Plots using Seaborn
- Plotting Bar Plots using Seaborn
- Plotting Histograms using Seaborn
- Customizing Plots using Seaborn
- Plotting Distribution Plots using Seaborn
- Plotting Categorical Plots using Seaborn

#### Project Work

### Generative AI

- Understanding Generative AI
- Applications of Generative AI
- Tools for working with Generative AI
- Understanding Techniques for Prompt Engineering for writing effective prompts
- Generative AI for Data Analysis and Visualization: Prompting, Summarization and Best Practices.
- Generative AI for SQL Queries: Prompting, Debugging and Optimization.
- Using Generative AI in Excel for Data Processing and Automation.
- Using Generative AI in making Power BI Dashboard.

### Project Work







## Certificates



Upon completion of Course/Program, you will receive certificate from Incapp. This certificate validates your skills as an expert in the technology.



## Our Impact

Students Successfully  
Trained

12800+

14+

Years of Experience

Students Recommend  
Us to Their People

99%

100%

Course Completion  
Rate

Projects Developed

100+

4.9/5

Google Rating



## What our students say about us

**Satyam Kumar**

2 reviews · 1 photo



a week ago

NEW

Your teaching in Java Technology has been truly exceptional. Your deep expertise, clear explanations, and practical examples have significantly enhanced my understanding of the subject. Thank you for your dedication and for making learning Java so engaging and enjoyable.

**Rajan Roy**

Local Guide · 19 reviews · 12 photos



a week ago

NEW

I have completed the Java Core and DSA with Java courses from Incapp. Rahul Sir taught us coding in a very clear and understandable manner. The teaching style was easy to follow. Additionally, Incapp offers numerous backup classes and doubt-clearing sessions. The faculty at Incapp are very helpful and always available to solve any problems you may have. I definitely recommend Incapp if you want to grow, improve your skills, and achieve your dreams. Thank you

**Jyoti Maurya**

1 review



2 weeks ago

NEW

By choosing this platform is blessing for me. It is just amazing and interesting to learn here don't be late. It's totally a worth decision to boost your knowledge.

And this place is very safe and secure especially for girls so don't be concerned about safety and location.

**Yuvesh kasana**

1 review



3 months ago

I just wanted to express my gratitude for the excellent coaching sessions you've been providing for Java. Your teaching style is incredibly clear and effective, making complex concepts easy to understand. I appreciate your patience in addressing all of my questions and your willingness to provide additional resources for further learning. Thanks to your guidance, I feel much more confident in my Java skills and excited to continue improving. Keep up the fantastic work!

## What our students say about us



**Anoop Shankar**

1 review

★★★★★ 2 months ago

Being the student of INCAPP is the best start to be the best in your field. Rahul Sir himself is mentoring many of us so that we as a developer will lead the IT sector. Here in INCAPP each one of you will be nurtured for the better future.



**bulbul Dwivedi**

2 reviews

★★★★★ 3 months ago

Incapp excellent communication skills with students A great review of python course essentials for programming in Incapp & a better understanding of coding, testing & applying style guidelines as per thoroughly given by instructor Mr. Praveen Chauhan



**Tanu Kumari**

2 reviews

★★★★★ 11 months ago

The coaching provided by Incapp for Web designing was exceptional.  
 The coach's expertise in Java was evident throughout the coaching sessions.  
 The coaching style was effective in breaking down complex concepts into easily understandable parts.  
 The coach provided clear explanations and examples, making it easier to grasp.  
 Overall, I am highly satisfied with the coaching provided by Incapp for Web designing.



**Aditya Kaushik**

1 review

★★★★★ a week ago **NEW**

I did Core Java and data. Structure and algorithm. Algorithm In Incapp. by "Rahul chauhan "Sir It has really helped me understand.. the Care Concept in my Course and I fell more Confident in what I am doing Thanks Rahul chauhan

& many more

## Courses we offer

▶▶▶▶▶

**JAVA**  
FULL STACK  
DEVELOPMENT

PROGRAM



▶▶▶▶▶

**PYTHON**  
FULL STACK  
DEVELOPMENT

PROGRAM



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**WEB**  
FULL STACK  
DEVELOPMENT

PROGRAM



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**C & C++**  
LANGUAGE




▶▶▶▶▶

**JAVA**  
LANGUAGE



▶▶▶▶▶

**DATA STRUCTURE  
& ALGORITHMS**  
USING JAVA



▶▶▶▶▶

**JAVA  
BACKEND**  
(Adv. Java & Spring & Hibernate Framework)



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**OCFA JAVA**  
CERTIFICATION



▶▶▶▶▶

**OCP JAVA**  
CERTIFICATION




▶▶▶▶▶

**PYTHON**  
LANGUAGE



▶▶▶▶▶

**PYTHON &  
DATA ANALYTICS  
WITH GENERATIVE AI**



▶▶▶▶▶

**DJANGO**  
FRAMEWORK



▶▶▶▶▶

**WEB  
DEVELOPMENT**



▶▶▶▶▶

**ADVANCED  
WEB FRONT END  
(React JS)**



▶▶▶▶▶

**WEB  
BACK END**  
(Node JS & MongoDB & Express JS)









Are you ready to elevate your career?



## Get In Touch

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Alpha I, Greater Noida, UP

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