

Data Science

With **AI** Syllabus

Newly Updated 2026-27



3000+
Placed Students



650+
Job Recruiters



50+
Expert Trainers

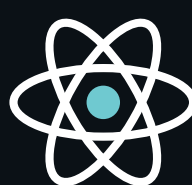


470+
Projects Works



100%
Placement Support

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Behind Every Great Institute is a Great Founder



Mr. Kunal Sir

Director of **CJC EdTech by Kunal Sir**.

Mr. Kunal Sonu, Director of **CJC EdTech by Kunal Sir**, holds a Master's degree in Computer Applications & has over **15+ years** of experience in Java/J2EE technologies. After resigning from Syntel, he pursued a career in teaching to provide in-depth knowledge and guidance to aspiring professionals. **Mr. Kunal** has delivered lectures at renowned institutions such as **Sinhgad Institutes, JSPM Group, & MMCOE, Pune**. With a passion for education, he is dedicated to helping **students achieve success in their careers**.

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3000+
Placed Students



15+
Course Options



650+
Job Recruiters



50+
Expert Trainers

Core Python

1. An Introduction to Python



- 🔗 What is Python and history of Python?
- 🔗 Features of Python.
- 🔗 Installation and Working with Python.
- 🔗 Understanding Python variables.
- 🔗 Python basic Operators.
- 🔗 Python Identifiers, Keywords.
- 🔗 Understanding python blocks.
- 🔗 Command line arguments.
- 🔗 Getting User Input.
- 🔗 Python Data Types.
- 🔗 What are variables?

2. Program Flow Control

- 🔗 Conditional blocks using if, else and else if.
- 🔗 For loops in python.
- 🔗 For loop using ranges, string, list and dictionaries.
- 🔗 Use of while loops in python.
- 🔗 Loop manipulation using pass, continue, break and else.
- 🔗 Programming using Python conditional and loops block.

3. List, Ranges, Dictionaries, Tuples and Sets in Python

- 🔗 Introduction.
- 🔗 Lists in Python.
- 🔗 Tuples in Python.
- 🔗 Python Dictionaries.
- 🔗 Dictionary manipulation.
- 🔗 Ordered Sets with tuples.
- 🔗 Sets.
- 🔗 Python Sets Examples.

4. File Input and Output in Python

- 🔗 File opening modes in Python.
- 🔗 Reading files in Python.
- 🔗 Writing files in Python.
- 🔗 Understanding built-in functions.

5. Exception Handling

- 🔗 Introduction to exception handling.
- 🔗 Avoiding code breaks using exception handling.
- 🔗 Handling various exceptions using try...except...else.
- 🔗 User define exception.

6. Object-Oriented Programming in Python

- 🔗 OOP concepts.
- 🔗 Concept of class, object, and instances.
- 🔗 Constructor, class attributes, and destructors.
- 🔗 Accessing attributes.
- 🔗 Built-in class attributes.
- 🔗 Inheritance.
- 🔗 Polymorphism
- 🔗 Achieving abstraction.
- 🔗 Encapsulation.

Database

7. Structured Query Language

- SQL MySQL Introduction.
- SQL Data Types.
- SQL DDL, DML, TCL.
- SQL Constraints.
- SQL DISTINCT Clause.
- SQL WHERE Clause.
- SQL MySQL Conditions. (AND, OR, BOOLEAN, LIKE, IN)
- SQL MySQL Functions. (MIN, MAX, AVG, SUM, COUNT)
- SQL ORDER BY Clause.
- SQL GROUP BY Clause.
- SQL Relationships in SQL.
- SQL Joins in SQL.



Data Science

8. Anaconda Distribution installation

- Installation
- Jupyter Notebook introduction
- Jupyter Commands
- Magic commands



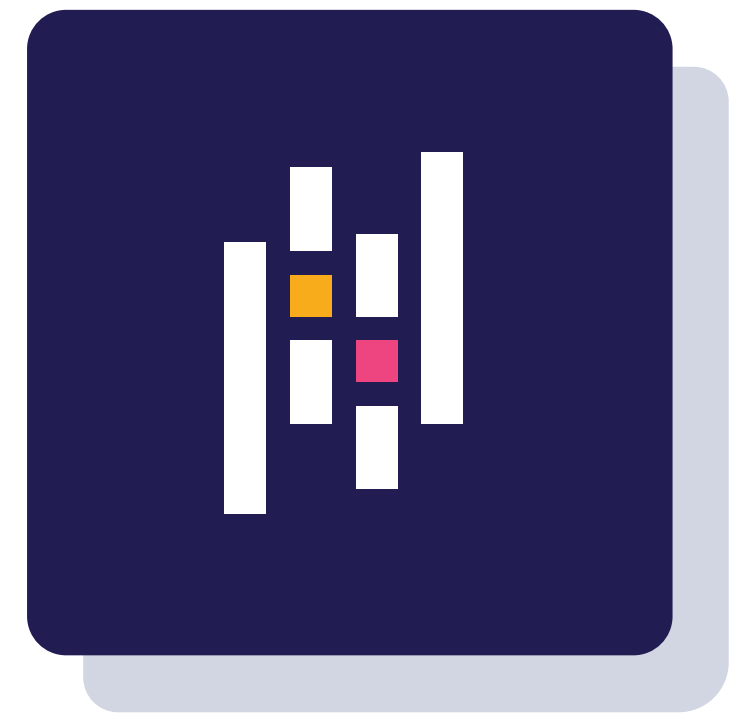
9. NumPy

- ▣ Introduction to NumPy Array
- ▣ Installation of NumPy module
- ▣ Why NumPy? Advantages over Python List?
- ▣ The Basics of NumPy
- ▣ Defining MultiDimensional Array
- ▣ Printing of NumPy Array
- ▣ Accessing NumPy array using fancy, index, slicing methods
- ▣ Array Manipulations
- ▣ Array Math
- ▣ NumPy functions
- ▣ NumPy Math functions
- ▣ Random number generation
- ▣ Dealing with NaN values within NumPy Array
- ▣ Date time handling using NumPy array
- ▣ Broadcasting/Reshape/Resizing
- ▣ Aggregate function
- ▣ Help on NumPy
- ▣ Save and load array to and from file

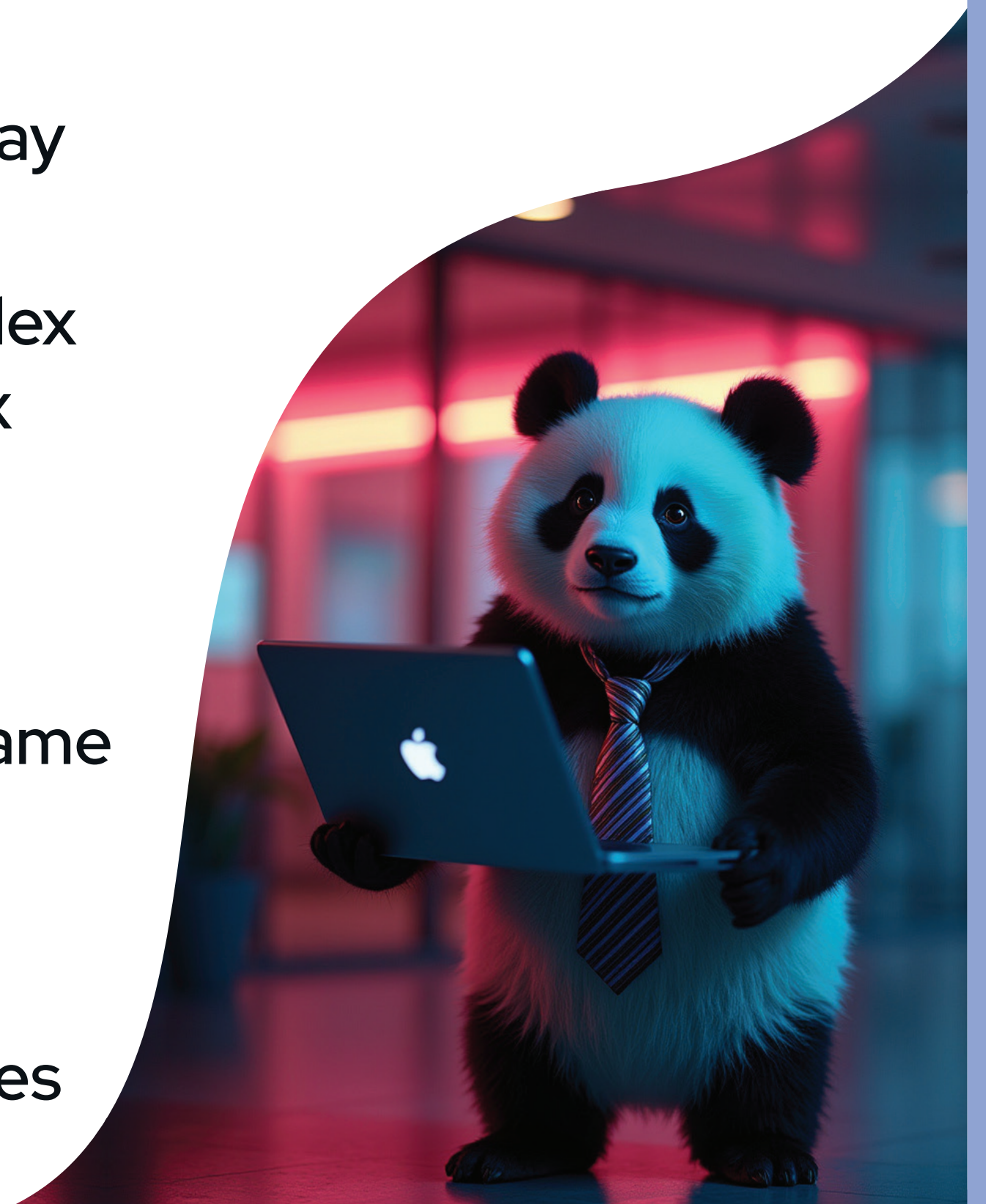


10. Pandas

- Introduction to Pandas
- Installation of Pandas
- Reading different file formats with different parameters
- CSV
- Excel
- JSON
- Series & operations
- Data Frames
- Creating customized index
- Hierarchical indexing
- Adding header to the rows
- Data Frame functions
- Creating data frame using Series, Data Dictionaries, files, List, Nddarray
- Accessing data frames
- Accessing rows – slicing, fancy, index
- Accessing columns by name, index
- Loc, iloc
- Adding column/s
- Adding row/s
- Manipulating values within data frame
- Dropping column/s
- Conversion of column data type
- Aggregate functions
- Statistical functions on Data Frames



PANDA



11. Statistics Essential

- What is Statistics?
- Type of Statistics Descriptive Statistics (mean,mode,range,etc)
- Inferential Statistics(Hypothesis testing, confidence etc.)
- measure of central tendency
- measure of dispersion
- Correlation and probability

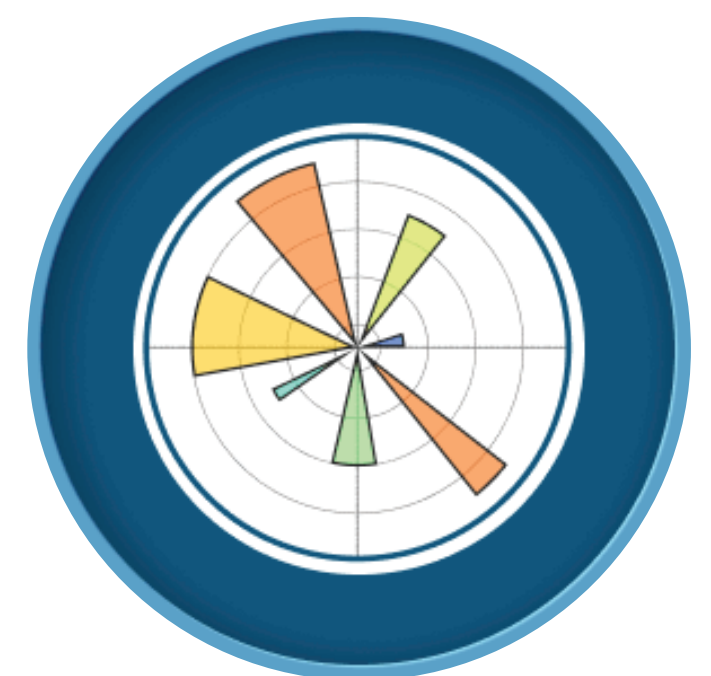
Data Visualization

12. Matplotlib

- | | | |
|-----------------|--------------------|----------------|
| ● Matplotlib | ● Bar Chart | ● Area Chart |
| ● Installation | ● Pie Chart | ● Box Plot |
| ● Configuration | ● Line Chart | ● Heatmap |
| ● How to plot | ● Multi Line Chart | ● Scatter Plot |
| ● Histogram | | |

Scikit-learn

Seaborn



Machine Learning

13. Machine Learning

🧠 Introduction

🧠 Regression

- 🧠 Introduction to classification problems
- 🧠 Identification of a regression problem
- 🧠 Dependent and independent variables
- 🧠 How to train the model in a regression problem
- 🧠 How to evaluate the model for a regression problem
- 🧠 How to optimize the efficiency of the regression model

🧠 Classification

- 🧠 Introduction to classification problems
- 🧠 Identification of a classification problem
- 🧠 Dependent and independent variables
- 🧠 How to train the model in a classification problem
- 🧠 How to evaluate the model for a classification problem

🧠 Clustering

- 🧠 Introduction to clustering problems
- 🧠 Identification of a clustering problem
- 🧠 Dependent and independent variables
- 🧠 How to train the model in a clustering problem
- 🧠 How to evaluate the model for a clustering problem
- 🧠 How to optimize the efficiency of the clustering model

🧠 Performance Metrics

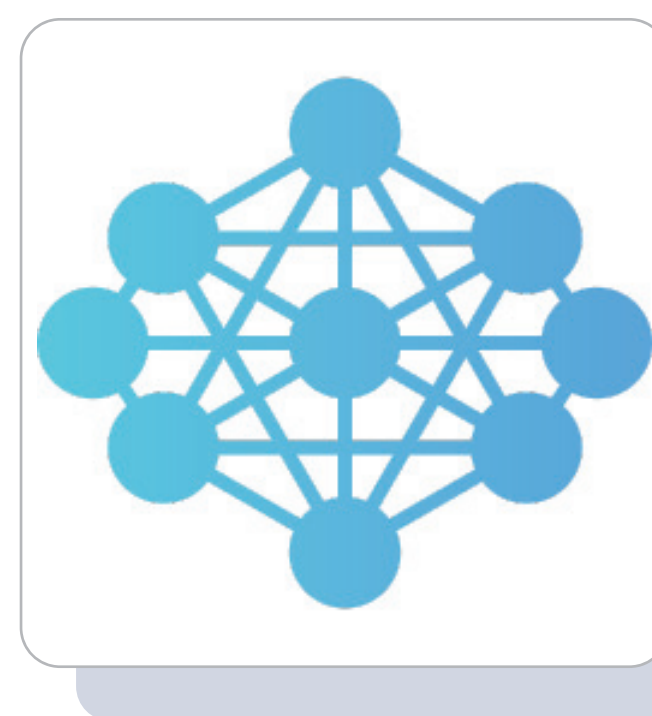
- 🧠 Classification reports – To evaluate the model on various metrics like recall, precision, f-score, etc.
- 🧠 Confusion matrix – To evaluate the true positive/negative, false positive/negative outcomes in the model.
- 🧠 R^2 , adjusted R^2 , mean squared error, etc.



Deep Learning

14. Deep Learning

- 🧠 What is deep learning
- 🧠 Understanding neural-network
- 🧠 Classification using CNN
- 🧠 CNN Architecture
- 🧠 Object detection using YOLO
- 🧠 YOLO Architecture
- 🧠 Implementation & Deployment



GenAI

15. AI Integration with DS

- ✖ Chatgpt
- ✖ Gemini
- ✖ Deepseek
- ✖ Claude etc.



16. Prompt Engineering

- ✖ Prompt Engineering
- ✖ What is prompt engineering
- ✖ Fundamentals of prompt design
- ✖ Types of prompts
- ✖ Advanced prompting Technique

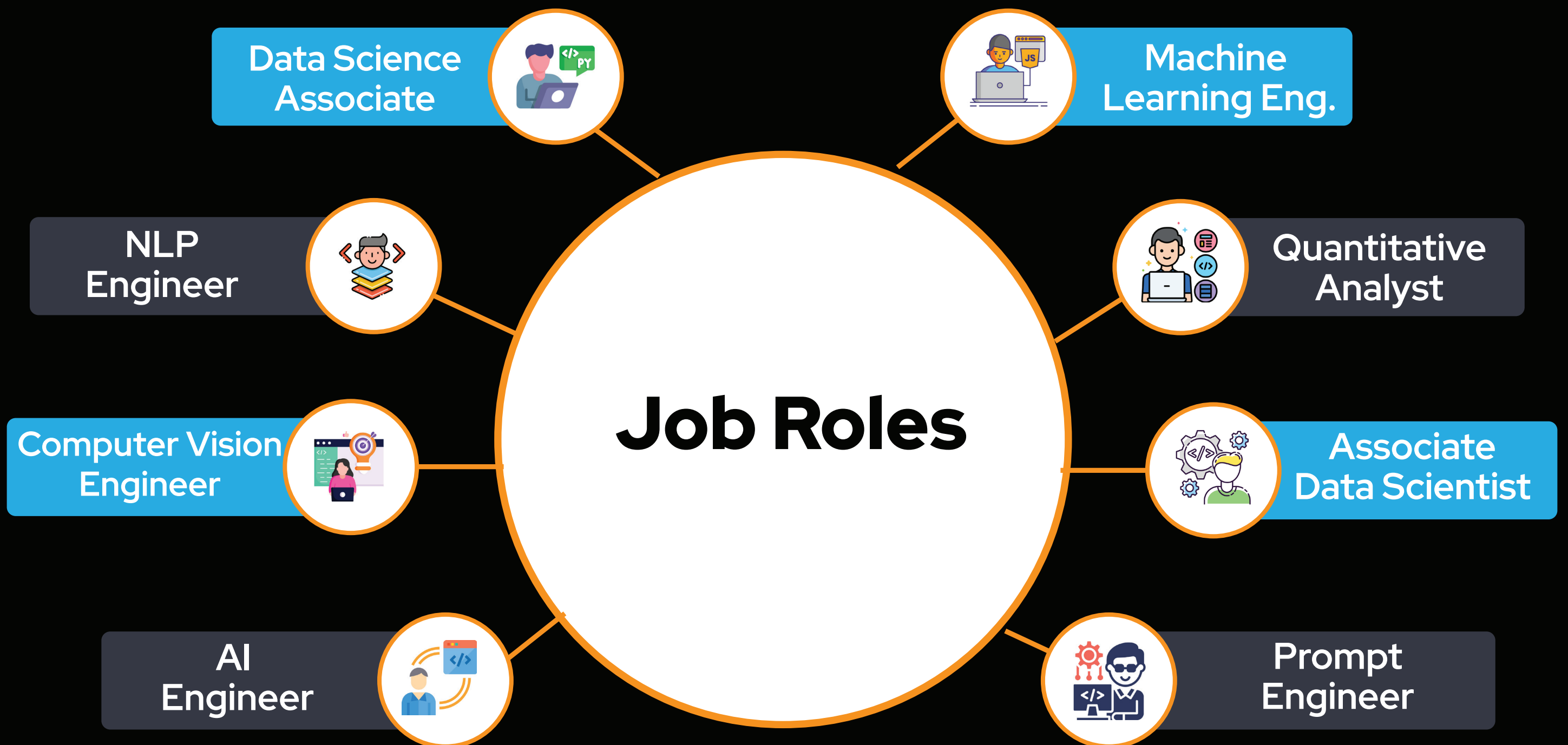
17. Git/GitHub/Bitbucket

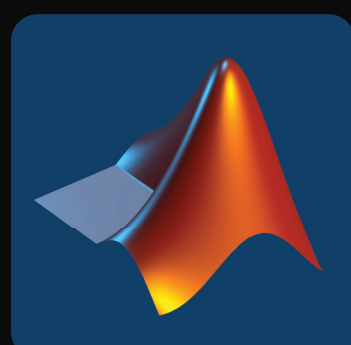
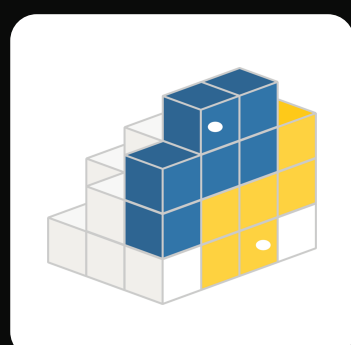
- 🕒 Introduction to version control
- 🕒 Basic commands
- 🕒 Working with branches
- 🕒 Collaborative development
- 🕒 Hands on Activities

18. AI Powered Job Search & LinkedIn Optimization

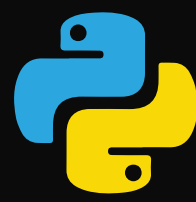


Career Opportunitites in Data Science





Java



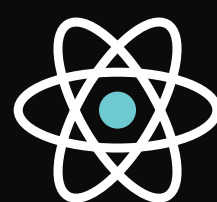
Python



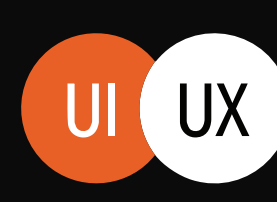
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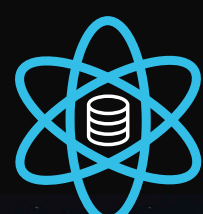
React



Design



Testing

Cloud
Computing

Data Sci.

Data
Analytics

DevOps



Angular

Why **Coding** Feels Impossible?
Kunal Sir Has the **Answer!**

Partnering for Your Growth



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