With AI

Data Analytics

Syllabus

2500+ Placed Students

650+ Job Recruiters

50+ Expert Trainers

470+ Projects Works

100% Placement Support

COURSES

CJC
Complete Java Classes
By Kunal Sir

www.completejavaclasses.com

88880 22204

Behind Every Great Institute is a Great Founder

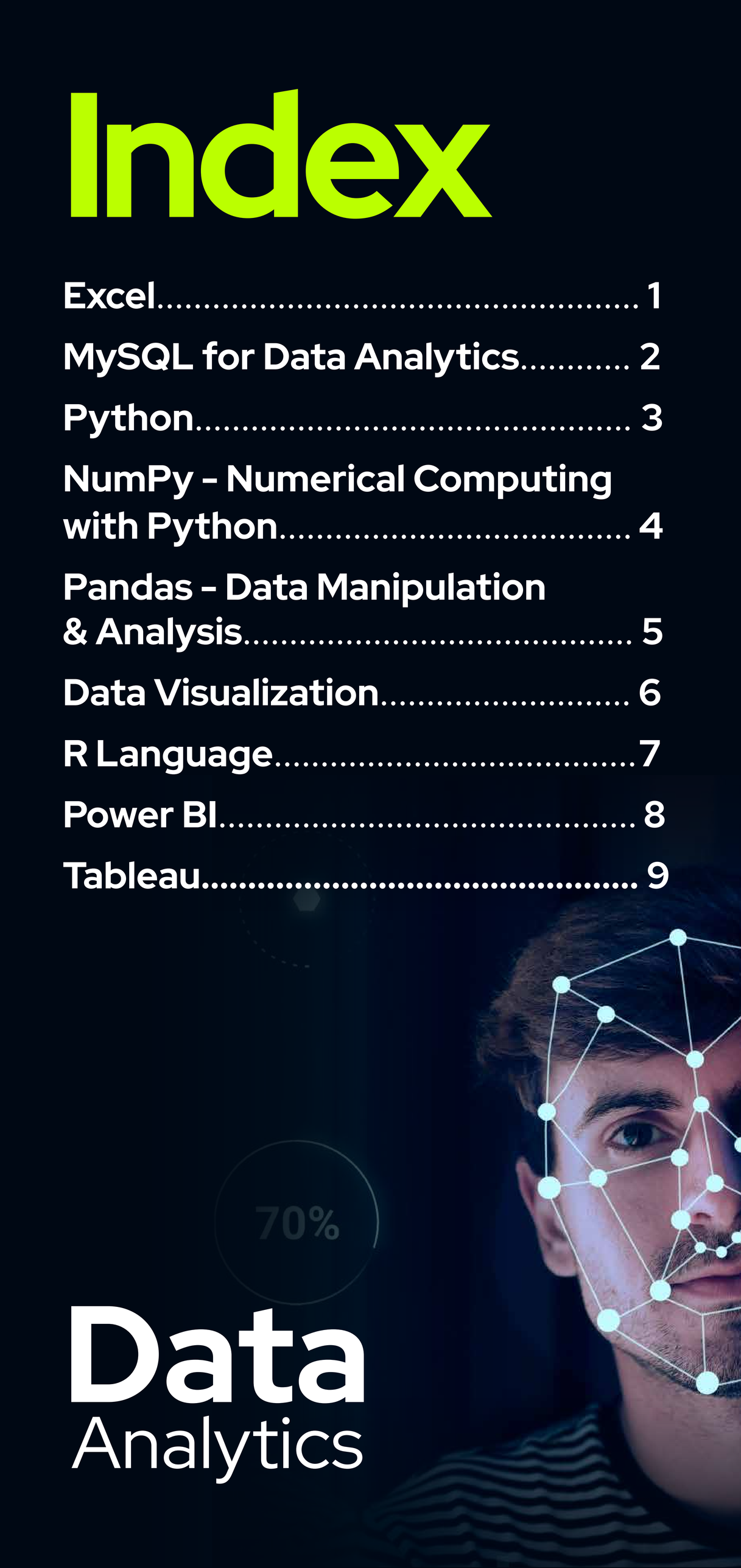
Mr. Kunal Sir

Director of Complete Java Classes

Mr. Kunal Sonu, Director of **Complete Java Classes,** 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.**

- **2500+** Placed Students
- **15+** Course Options
- **650+** Job Recruiters
- **25+** Expert Trainers

Index



Data Analytics

Excel

Module 1: Introduction to Excel

- Overview of Excel Interface
- Workbook, Worksheets, Rows, and Columns
- Data Entry and Formatting
- Basic Excel Functions (SUM, AVERAGE, MIN, MAX)
- Cell Referencing (Relative, Absolute)

Module 2: Data Handling and Cleaning

- Data Sorting and Filtering
- Removing Duplicates
- Text Functions (LEFT, RIGHT, MID, LEN, TRIM, PROPER, CONCATENATE)
- Date & Time Functions (TODAY, NOW, YEAR, MONTH, DAY, DATEDIF)
- Find & Replace, Go To Special

Module 3: Advanced Functions & Formulas

- Logical Functions (IF, AND, OR, IFERROR)
- Lookup & Reference Functions (VLOOKUP, HLOOKUP, XLOOKUP, INDEX, MATCH)
- Mathematical & Statistical Functions (COUNT, COUNTA, COUNTIF, COUNTIFS, SUMIF, SUMIFS, AVERAGEIF)
- Working with Named Ranges

Module 4: Data Visualization with Charts

- Creating Basic Charts (Bar, Column, Line, Pie)
- Formatting Charts (Titles, Labels, Legends, Axis Formatting)
- Advanced Charts
- Conditional Formatting for Data Analysis

Module 5: Data Analysis using Pivot Tables & Pivot Charts

- Introduction to Pivot Tables
- Creating and Customizing Pivot Tables
- Sorting, Filtering, and Grouping Data in Pivot Tables
- Using Calculated Fields and Value Fields
- Creating Pivot Charts for Data Insights

Module 6: Power Query & Data Automation

- Introduction to Power Query
- Importing and Transforming Data
- Data Cleaning with Power Query
- Combining Data from Multiple Sources
- Automating Data Refresh

Module 7: Macros and VBA

- Recording and Running Macros
- Introduction to VBA Editor
- Automating Repetitive Tasks

Module 8: Case Studies & Real-World Applications

- Data Cleaning and Transformation

Module 9: Final Project & Certification

- Hands-on Project on Real-World Dataset
- Excel Proficiency Test

MySQL for Data Analytics

Module 1: Introduction to MySQL

- Overview of Databases and SQL
- Introduction to MySQL and Installation
- MySQL Workbench and Command Line Interface
- Understanding Relational Database Management System (RDBMS)
- Creating and Managing Databases

Module 2: SQL Basics

- Data Types in MySQL
- Creating Tables (CREATE, DROP, ALTER)
- Inserting Data (INSERT INTO)
- Updating and Deleting Data (UPDATE, DELETE)
- Basic Data Retrieval (SELECT, WHERE, ORDER BY)

Module 3: Data Filtering and Aggregation

- Using WHERE, LIKE, IN, BETWEEN Operators
- Logical Operators (AND, OR, NOT)
- Aggregate Functions (COUNT, SUM, AVG, MIN, MAX)
- Grouping Data using GROUP BY and HAVING

Module 4: Advanced SQL Queries

- Joins (INNER JOIN, LEFT JOIN, RIGHT JOIN, FULL JOIN)
- Subqueries and Nested Queries
- Using CASE Statements for Conditional Logic
- Window Functions (ROW_NUMBER, RANK, DENSE_RANK)

Module 5: Data Manipulation and Transactions

- Understanding ACID Properties
- Implementing Transactions (START TRANSACTION, COMMIT, ROLLBACK)
- Using Indexes for Performance Optimization
- Views (Creating, Modifying, and Dropping Views)
- Temporary Tables and Their Uses

Module 6: Data Import & Export

- Importing Data from CSV/Excel Files
- Exporting Data to CSV/Excel Files
- Using MySQL Workbench for Data Import/Export
- Working with Large Datasets

Module 7: Stored Procedures & Functions

- Introduction to Stored Procedures
- Creating and Using Stored Procedures
- User-Defined Functions (UDFs)
- Triggers and Events in MySQL

Module 8: Real-World Data Analytics with MySQL

- Analyzing Sales & Marketing Data
- Customer Segmentation and Insights
- Financial Data Analysis

Module 9: Final Project & Certification

- Hands-on Project with a Real-World Dataset
- MySQL Proficiency Test

Python

1. Introduction to Python

- Overview & Features
- Installation & Setup

2. Python Fundamentals

- Variables & Data Types
- Operators (Arithmetic, Logical, Comparison, Bitwise, etc.)

3. Control Flow

- Conditional Statements (if, elif, else)
- Loops (for, while)

4. Functions in Python

- Function Definition & Calling
- Return Statement
- Lambda Functions

6. Data Structures

- Lists & Tuples
- Sets & Dictionaries

NumPy - Numerical Computing with Python

1. Introduction to NumPy

- Installing NumPy & Anaconda
- Jupyter Notebook Basics

2. Arrays in NumPy

- Creating Arrays
- Arithmetic Operations on Arrays
- Homogeneous Nature of Arrays

3. Working with Arrays

- Prefilled Arrays (zeros, ones, full, etc.)
- Dimensional Arrays (1D, 2D, 3D, ND)
- Reshaping & Flattening Arrays

4. Advanced Array Operations

- Using linspace for Evenly Spaced Values
- Generating Random Numbers (random.random, random.randint)
- Accessing Elements in ND Arrays

5. Data Handling with NumPy

- Importing & Exporting Data
- Saving & Loading Arrays
- Working with Datetime (Retrieve Date & Time)

Pandas - Data Manipulation & Analysis

1. Introduction to Pandas

- Overview & Installation
- Series & DataFrame Basics

2. Working with Series and Dataframes

- Typecasting Data
- Converting Structures to Series
- Custom Indexing
- Using squeeze() Method

3. Reading & Writing Files

- Reading Excel, CSV, and JSON Files

4. Data Aggregation & Analysis

- Aggregate Functions on Series & DataFrames
- Basic Methods (head(), tail(), sample(), value_counts(), sort_values(), sort_index())

5. Handling Missing Data

- isna(), fillna(), dropna(), drop_duplicates(), isnull()

6. Data Selection & Grouping

- iloc & loc for Data Selection
- groupby() for Aggregations
- Conditional Selection in Series
- Installation & Setup

Data Visualization

1. Matplotlib - **Basic Plotting** - Line, Bar, Scatter, Histogram, Pie Charts
2. Seaborn - **Advanced Visualization** - Customizing Visuals Styling Graphs

R Language

1. Introduction to R - Overview & Features | Installation & Setup
2. R Fundamentals - Syntax, Variables & Data Types | Operators (Arithmetic, Logical, Relational, Assignment)
3. Control Flow - Conditional Statements (if, else, else-if) | Loops (for, while)
4. Functions in R - Function Definition & Calling | Return Statement

Data Structures in R

5. Vectors in R - Creating & Manipulating Vectors | Vector Operations
6. Lists in R - Creating & Accessing List Elements | Modifying Lists
7. Matrices in R - Creating & Indexing Matrices | Matrix Operations
8. Arrays in R - Creating & Accessing Arrays | Multi-Dimensional Arrays
9. Data Frames & Factors in R - Creating & Manipulating Data Frames | Factors & Their Use in Categorization

File Handling in R

10. Reading & Writing Files - Importing CSV, Excel, and JSON Files | Performing Operations on Files
11. Data Manipulation & Cleaning - Handling Missing Data | Data Cleaning Techniques

Data Visualization in R

12. Graphical Representation of Data - Plotting Basics | Line, Scatter, Pie, and Bar Charts

Advanced Topics in R

13. Statistical Analysis in R - Working with Datasets | Computing Max, Min, Mean, Median, Mode

Tableau

Introduction to Tablue
- What is Tableau?
- Why Data Visualization?
- Excel vs BI Tools: Understanding the differences and when to use each.
- Top BI Tools: An overview of popular business intelligence tools.

Tableau Products
- Live vs Extract: The difference between live connections & extract data in Tableau.
- File Types: Types of files used in Tableau (e.g., .twb, .twbx).
- Desktop & Server Architecture: The architecture of Tableau Desktop vs Tableau Server.

Setting Up Tableau
- Install Tableau Public & Create Account: Steps for installation & setting up an account.
- Get Datasets, Publish First Viz: How to import datasets and create your first visualization.
- Tableau Interface Overview: Understanding the different parts of the Tableau interface.

Combining Data
- Data Modeling: How to structure & connect different datasets.
- Joins, Unions, Relationships: Methods for combining multiple data sources.
- Data Blending: Combining data from different sources when needed.

Tableau Metadata
- Data Types: Understanding different data types in Tableau.
- Dimensions & Measures: Differences & usage.
- Discrete vs Continuous: The distinction & when to use each.
- Tableau Products
- Development & Sharing Products: Overview of Tableau Desktop, Tableau Server, Tableau Public, etc.

Data Organization
- Renaming, Aliases: How to organize and label data fields.
- Hierarchy: Creating hierarchical structures within data.
- Groups, Sets, Bins: Creating groups, sets, & bins for better analysis and organization.

Filtering & Sorting
- Creating & Customizing Filters: How to apply filters & customize them for your data.
- Sorting: Organizing data in a meaningful order.
- Tableau Parameters & Actions
- Understanding Tableau Parameters: How parameters work & how to use them in visualizations.
- Tableau Actions: Actions like highlight, filter, & URL actions to make visualizations interactive.

Tableau Calculations
- Functions: Using number, string, date, logical, & aggregate functions in Tableau.
- ATTR(), Fixed, Exclude, Include: Advanced calculation techniques in Tableau.

Charts & Dashboards
- Overview of various chart types: Bar, Line, Pie, etc.
- Building Dashboards: How to combine charts & create effective dashboards for storytelling.

Power BI

Introduction to Power BI

- Overview of Business Intelligence & Power BI
- Installing and Setting Up Power BI Desktop
- Understanding Power BI Components
- Connecting to Different Data Sources
- Importing Data and Data Refresh

Data Preparation and Cleaning with Power Query

- Understanding Power Query Editor
- Data Transformation
- Handling Missing Data and Duplicates

Data Modeling and Relationships

- Introduction to Data Modeling
- Creating and Managing Relationships between Tables

DAX (Data Analysis Expressions)

- Introduction to DAX and Its Importance
- Basic DAX Functions (SUM, AVERAGE, MIN, MAX)
- Logical Functions (IF, SWITCH)
- Aggregation and Filter Functions (CALCULATE, FILTER, ALL, DISTINCT)
- Time Intelligence Functions

Data Visualization and Reporting

- Introduction to Power BI Visuals
- Creating and Customizing Charts (Bar, Line, Pie, Map, Table, Matrix)
- Using Slicers and Filters for Interactive Reports
- Creating Drill-Through and Drill-Down Reports
- Conditional Formatting and Tooltips

Advanced Visualizations & Custom Visuals

- Using Advanced Charts
- Designing Dashboards for Better Insights
- Using Bookmarks and Buttons for Navigation

Final Project & Certification

- Hands-on Project on Real-World Dataset
- Power BI Proficiency Test

PUNE: KARVE NAGAR | AKURDI

1st Floor, Above Rupam Sweets, Near Karvenagar Bus Stop, **Karve Nagar, Pune,** 411052.

3rd Floor, Above Bhavani Sweet Building, Grudwara Chowk, Near Railway Station, **Akurdi, Pune,** 411035.

88880 22204

Explore Our Courses

and Take the First Step Toward Your Dream Career!

Subscribe to Our YouTube Channel for the Latest Videos

@completejavaclasses

Why CJC is Perfect for Your Career

Mock Interviews & Contests

Expert-Level Interview Preparation

24/7 Doubt Support

Instant Doubt Support for Smooth Preparation

Certified Internship Experience

Industry-Approved Certificate Upon Course Completion

Job-Oriented Projects

Enhance Your Portfolio with End-to-End Projects

1:1 Expert Mentorship

Get Mentored by Industry Leaders from MAANG+

Certification in Expertise Development

Industry-Approved Certificate Upon Course Completion

Meet Our Expert Trainers

Mr. Amit Kumar
Instructor
8+ Years of Expertise

Mr. Prashant Sir
Sr. Java Trainer
4+ Years of Expertise

Mr. Nandu Sir
Sr. Java Trainer
6+ Years of Expertise

Mr. Ajinkya Sir
Java Traine
4+ Years of Expertise

Mr. Bhagavat Sir
Sr. Python Trainer
7+ Years of Expertise

Mr. Akshay Sir
Sr. Cloud Trainer
4+ Years of Expertise

Explore More
Click to Access Our Other Syllabi!

DOWNLOAD

Java | Python | aws | GENAI | React | UI UX Design | Testing

Cloud Computing | Data Sci. | Data Analytics | DevOps | Angular

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

CJC
Complete Java Classes
By Kunal Sir

A Cognizance Of Excellence

PUNE: KARVE NAGAR | AKURDI

1st Floor, Above Rupam Sweets, Near Karvenagar Bus Stop, **Karve Nagar, Pune,** 411052.
3rd Floor, Above Bhavani Sweet Building, Grudwara Chowk, Near Railway Station, **Akurdi, Pune,** 411035.

www.completejavaclasses.com **88880 22204**