




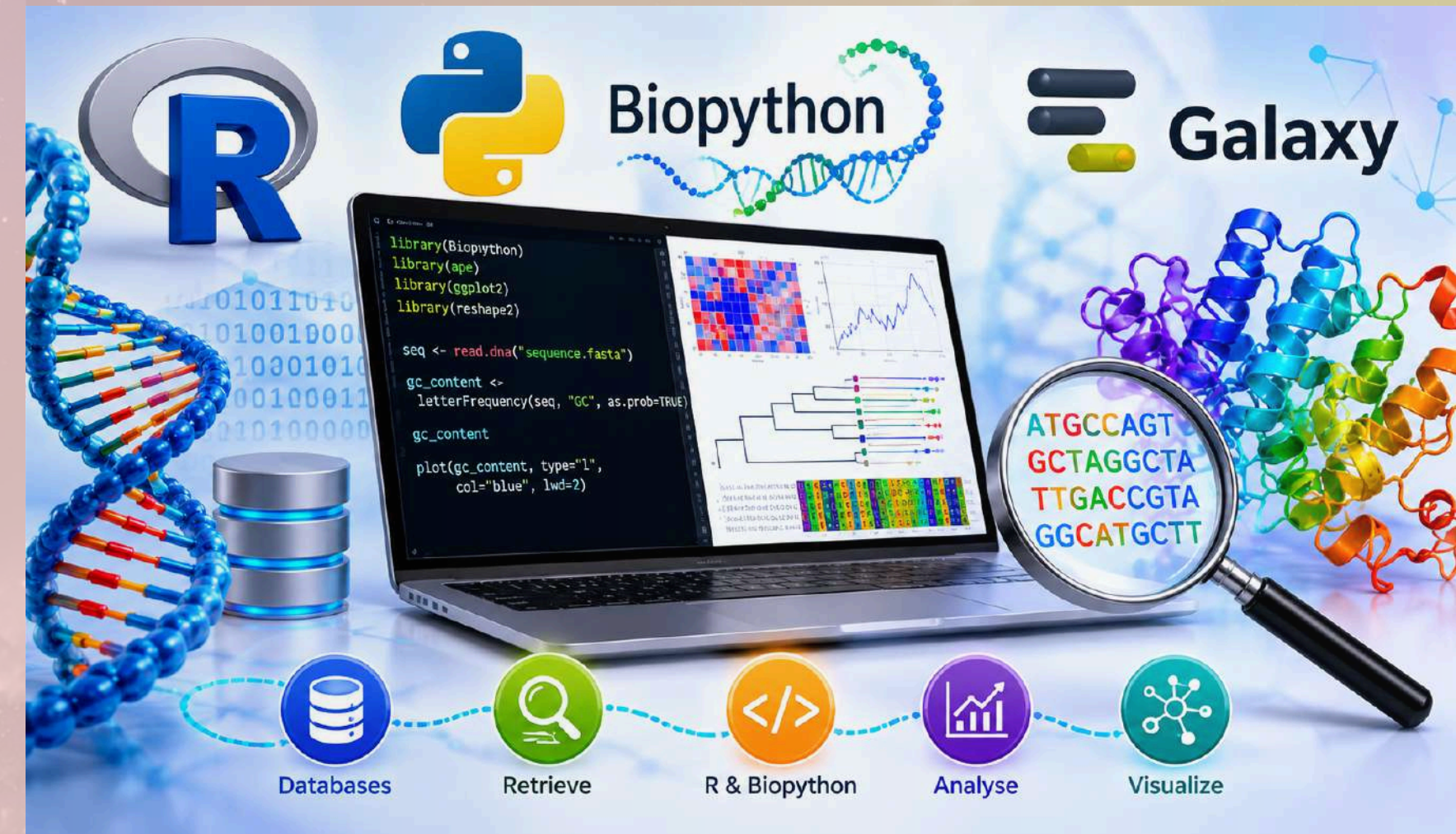
*Online Workshop on*  
**Bioinformatics with R,  
Biopython and Galaxy**

Practical Bioinformatics Training Using R, Python & Galaxy Platform

 **Date: 15-20 June 2026**  **6:00 PM IST**

 Dubai – 4:30 PM |  KSA – 3:30 PM |

 London – 1:30 PM |  New York – 8:30 AM |  Singapore – 8:30 PM



**Resource Person**

**Dr. S. Padma**

**Assistant Professor**

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## About the Workshop

This hands-on workshop bridges biology, computer science, and data analytics to deliver practical training in modern bioinformatics. Participants will learn to retrieve, analyze, and visualize genomics and proteomics data using essential open-source tools like R, Biopython, and Galaxy. Designed for career growth in biotechnology and life sciences, this session focuses on developing industry-relevant computational skills crucial for research, internships, and higher studies.

## Workshop Highlights

- Hands-on Training on R & Biopython
- Introduction to Genomics & Sequence Analysis
- Practical Learning with Galaxy Platform
- Learn Biological Database Mining
- Quality Analysis for NGS Data
- Sequence Retrieval & Visualization Techniques
- Beginner Friendly + Research Oriented
- Real-Time Demonstration Sessions
- Industry & Research Focused Curriculum
- Certificate from CATR, Lucknow
- Guidance by Experienced Faculty
- Skill Development for Future Research & Jobs

## Skills You Will Gain

### Bioinformatics & Computational Skills

- Biological database handling
- Sequence retrieval and analysis
- Protein & nucleotide data interpretation
- Genomic and proteomic data analysis

### Programming & Data Skills

- Introduction to R programming
- Working with Biopython libraries
- Data visualization basics
- Command-line bioinformatics tools

### Research & Analytical Skills

- Comparative sequence analysis
- GC content analysis
- Amino acid composition analysis
- NGS sequence quality assessment

### Professional Skills

- Scientific data handling
- Research problem solving
- Computational thinking
- Research documentation & interpretation

## Career & Job Opportunities

This workshop helps participants build industry-relevant and research-oriented skills highly valuable in modern life sciences and biotechnology sectors.

- Research Assistant Positions & Bioinformatics Internships
- Genomics & Proteomics Research
- Biotechnology & Pharma Industry Roles
- Higher Studies & Dissertation Projects
- Computational Biology Research & NGS Data Analysis Projects
- Academic Research Opportunities
- Skill Enhancement for MSc / PhD Admissions
- Freelance & Remote Data Analysis Opportunities



# Learning Outcomes

- By the end of this workshop, participants will be able to:
- Retrieve biological sequences from public databases
- Use R and Biopython for sequence analysis
- Perform comparative genomic analysis
- Analyze protein and nucleotide data
- Evaluate sequence quality for downstream analysis
- Understand the basics of NGS data workflows
- Work with Galaxy bioinformatics platform
- Apply computational tools in research projects

# Target Audience

- Undergraduate (UG) students in Life Sciences, Biotechnology, Biochemistry, Microbiology, and related disciplines.
- Postgraduate (PG) students pursuing Life Sciences and Bioinformatics.
- Research scholars and beginners interested in biological data analysis and computational biology.
- Faculty members and professionals seeking foundational bioinformatics training.

# Participant Deliverables

- ISO-IAF Accredited Certificate
- Live session recordings (lifetime access) & lecture PPTs
- Software, tools & resource download links
- 100% Practical Learning Approach
- Mini Project & Final Presentation
- Suitable for NAAC / NBA / Academic Skill Development Records

# Fee of the Training

- Indian Participants: ₹ 1500
- International Participants: USD : \$ 95



# Course Module

## DAY 1

Biological databases – retrieval of protein and nucleotide sequences

## DAY 2

Introduction to Galaxy and command-line tools like Biopython and R

## DAY 3

Retrieving nucleotide and protein sequences into R and Biopython

## DAY 4

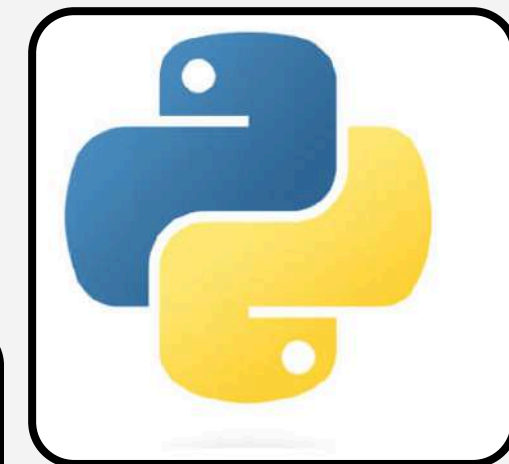
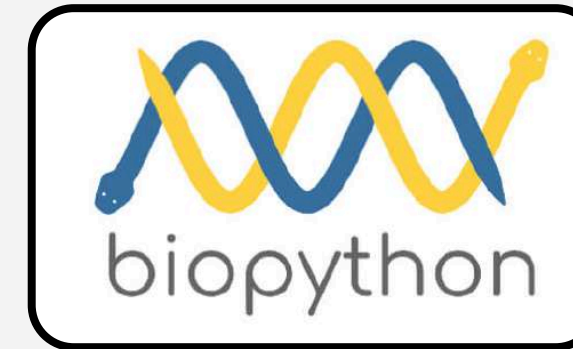
Comparing GC content of sequences across species using R and Biopython

## DAY 5

Determining amino acid composition of proteins using R and Biopython

## DAY 6

Analysing sequence quality for NGS analysis using Galaxy



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# Turn Biological Data into Discoveries

