

Bv^{rsity}

Bioinformatics, Genomics & Data-Science

Post-graduate Certification | Executive Certification

IITM
PRAVARTAK
CATALYSING INNOVATION



WHO THIS IS FOR

Skip the theory-heavy route, Build an industry-ready **bioinformatics career in 6 months**



Traditional programs focus on concepts

This program is built around what the industry actually uses: bioinformatics tools, genomic data workflows, and applied data science.



Work on Real Bioinformatics Pipelines

Move beyond assignments. Work with real-world datasets and tools like NGS workflows, Python, and genomic analysis pipelines - the same ones used in biotech companies.



Designed for Career Transition

Built for MSc, BTech, and early professionals (0–3 years). Especially those stuck in non-core roles and looking to move into bioinformatics and data-driven careers.



Placement- Backed Learning

This is not just a learning program. Structured support to help you transition into industry roles, including portfolio building, interview prep, and placement assistance.

POST GRADUATE PROGRAMME IN
BIOINFORMATICS, GENOMICS & DATA-SCIENCE

Bvrsity

Table of Contents

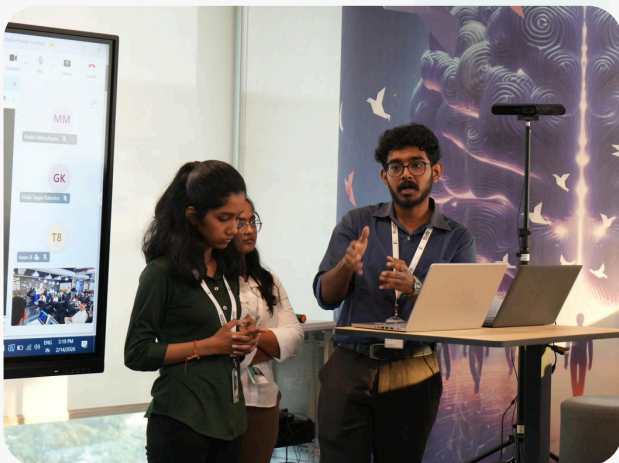
Course Overview	01
About Bioinformatics	02
How you learn	03
What you build	04
Course structure	06
Why Bversity ?	07
Curriculum	08
Portfolio & Resume	13
Expert Mentors	14
Career Support	15
Certification	17
Admission & Fee	18
Alumni voices	19



COURSE OVERVIEW

Break into the **top bioinformatics roles** and accelerate your career with **industry-ready skills**

This 8-month Industry PG Program helps you transition into bioinformatics, genomics, and data-driven roles with the right mix of practical skills, real-world projects, and structured guidance. Built for life science graduates and early professionals, the program focuses on what the industry actually demands, from working with genomic datasets to building applied analysis workflows.



This is the ONLY programme in India built exclusively towards the industry needs, and is supported by pioneering biotech leaders.

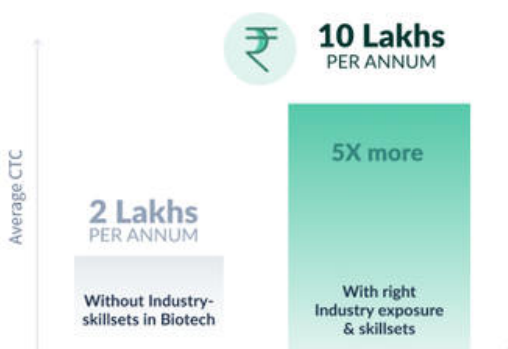
Ditch the traditional two-year grind and experience an action-packed 8 months in your journey to success, without compromising on the quality of your education. Get ready to fast-track your way to the top!

Why learn **Bioinformatics & Genomics**

A career in bioinformatics can be **intellectually satisfying** and **financially lucrative**. It's open to anyone with a relevant background, but new researchers are in frustratingly short supply.

The goal of bioinformatics is to characterize humans at the molecular level, and to use this information to prevent and treat disease, and improve health and longevity. From genomics to proteomics, metabolomics to metagenomics, 'omics research is generating a flood of data. Bioinformaticians use **systems biology, AI and machine learning** approaches to look for patterns in the data. From this we can begin to unravel the mechanisms of disease, identify novel biomarkers and drug targets, and eventually develop therapies. It's tremendously exciting.

Higher salaries with right skill sets is possible



Source: Internal Report

Increasing Demand for Bioinformaticians,



Source: Microsoft

TICE

13 million jobs available globally in Bioinformatics & Genomics skill sets

[Read More](#)

THE ECONOMIC TIMES

Today India is recognized as the leading hub for Bio-innovation & Bio-manufacturing towards a \$ 5 trillion economy

[Read More](#)

Bloomberg

Over 80% Indian Biotechnologists are unemployable, lack new-age technology skills: Report

[Read More](#)

Develop real-world bioinformatics capabilities in **8 months**, through industry-focused learning

01. Learn

- Move through carefully sequenced subjects where each one builds on the last, so nothing you learn sits in isolation
- Stay on track with biweekly live Q&A sessions and milestone-based hands-on sessions placed where you need them most
- Learn the way professionals work, the majority of your time is spent doing, not reading



02. Build

- Test every subject through real analytical tasks on biological data, not exams
- Work hands-on with the tools bioinformatics teams actually use, GATK, Cytoscape, Nextflow, Python, and R
- Walk away from every subject with scripts, analyses, and outputs that build into a working portfolio

03. Start your career

- Complete a capstone project spanning the full cycle, from problem framing to final submission
- Graduate with demonstrable capabilities in end-to-end workflow execution, reproducible code, and biological result interpretation
- Enter the job market with a portfolio, a project, and the confidence to match



Built for industry readiness gain **job-aligned skills** and confidently step into the **right roles**



From Skills to Job-Readiness

Move beyond theoretical knowledge and develop the computational and analytical capabilities that bioinformatics teams are actively hiring for



Work That Speaks for Itself

Build a portfolio of hands-on projects using real biological datasets, work to show, not just concepts to explain



Know Where You Fit

Understand which roles align with your background, and exactly what each one demands



Enter the Market Prepared

Structured support across technical communication, project presentation, and interviews, so you prove what you know, not figure it out.

As featured in



*"Randstad Sourceright's 2022 life sciences and Biopharma Talent Trends report found that a third (33%) of C-suite and human capital leaders in the life sciences and pharmaceuticals sector say **talent scarcity is a major pain point for the sector**, which is hiring extensively this year. With demand for life sciences products expected to grow faster than the global GDP in the next few years, 45% of those same talent leaders say the main reason they are looking to hire is to prevent talent scarcity from slowing their business."*



Course **structure** and **schedule**

Learning is designed to be flexible, structured, and outcome-focused, allowing you to build skills alongside your existing commitments.

Recorded sessions are available throughout the week for self-paced learning, supported by biweekly live QnA sessions for doubt resolution & concept clarity.

Learners are expected to put in a minimum of 8 to 10 hours of effort per week to effectively apply and build practical skills.

Theory studio: Bioinformatics, Genomics & Data Science

Online

- For life science graduates and working professionals who know biology but need to speak the language of data
- Covers biological data foundations to AI in the order that actually makes sense
- Paced for both working professionals and fresh graduates

Core studio: Skill Development & Portfolio Building

Online

- A programme you produce work in, not sit through
- Tools and workflows drawn from what industry actually runs on
- Build a portfolio that reflects where you are going, not where you came from

Career Studio: Career Upgradation Support

Online

- Knowing bioinformatics and getting hired for it are two different things, this closes that gap
- Leave knowing which roles fit your profile and how your work answers their questions
- Support that prepares you for the conversation that gets you the role

WHY BVERSITY ?

What the regular colleges weren't able to do, **we do it in style**

1 Curriculum

Traditional Education

 Outdated

2 Instructors

 No Industry Experience

3 Assignments

 Theoretical written papers

4 Mentorship

 No dedicated guidance

5 Internship

 No support for Internship Opportunities

6 Employability

 Has to undergo extra training

7 Duration

 2 long years

8 Graduate

Still not ready to match the industry needs

The Bversity Edge

 Real-world, ready for 2028 & beyond

 Work at Medgenome, Biocon, Laurus Bio & more

 20+ industry assignments & projects done

 Monthly 1-1 sessions with Industry Professionals

 Work in a leading Biotech firm while you learn for 5 months

 Ready to work at Top Biotech Companies

 1 year & fast-track your career

At the level of a top Biotech firm's Mid-Scientist

Get started !

A learning journey that **unlocks your biotechnology** career for you

Module 1 : Basics of Biological Data

Foundations

- Understand different omics data types and how they are generated
- Navigate biological databases and learn how they are classified
- Retrieve and integrate data from public and specialised databases

Module 2 : Using Biological Databases and Omics Resources

Foundations

- Explore public and specialised databases used in real workflows
- Learn efficient data retrieval techniques from biological databases
- Understand how databases connect and data integration works

Module 3 : Core Computing Skills for Bioinformatics

Foundations

- Set up Python and R for bioinformatics work
- Learn syntax, code organisation, and essential data structures
- Build the programming foundation every subject ahead depends on

Module 4 : Python and R for Biological Data Analysis

Foundations

- Apply Python fundamentals to real biological data problems
- Perform exploratory data analysis on biological datasets
- Create meaningful data visualisations in R

Module 1 : Sequencing Technologies and Study Design

Applied Genomics & NGS

- Understand how modern NGS and Illumina platforms work
- Learn differences between WGS, exome, and targeted sequencing
- Connect sequencing technology choices to experimental design

Module 2 : Step-by-Step Pipelines for NGS Data

Applied Genomics & NGS

- Run NGS analysis from raw data through quality assessment
- Understand what happens at each pipeline stage and why
- Build and interpret genomic workflows using industry approaches

Module 3 : RNA-Seq and Gene Expression Analysis

Applied Genomics & NGS

- Understand transcriptomics and how RNA-Seq works
- Design RNA-Seq experiments and process data correctly
- Interpret gene expression outputs in a biological context

Module 4 : Finding and Interpreting Genomic Variants

Applied Genomics & NGS

- Apply GATK best practices to identify genomic variants
- Understand viral variants and population genetics connections
- Learn how GWAS studies are designed and interpreted

Module 1 : Probability and Inference for Biological Data

Biostatistics

- Understand probability distributions applied to biological data
- Apply hypothesis testing and ANOVA to compare biological groups
- Use non-parametric tests when standard assumptions are unmet

Module 2 : ANOVA and Non-Parametric Tests

Biostatistics

- Build and interpret linear and logistic regression models
- Understand model selection criteria for biological questions
- Run diagnostic checks to validate model assumptions

Module 3 : Building and Checking Regression Models

Biostatistics

- Apply survival analysis to time-to-event biological data
- Use multivariate methods for datasets with interacting variables
- Perform cluster analysis to identify biological data groupings

CURRICULUM

Module 4 : Survival Analysis, Multivariate Methods and ML

Biostatistics

- Understand clustering techniques in a biostatistics context
- Connect machine learning concepts to biological predictive modelling
- Build introductory predictive models on biological datasets

Module 1 : Biological Networks and Pathways

Biological Network Analysis

- Understand structure and function of protein interaction networks
- Explore protein-DNA interactions and signalling network mapping
- Connect network topology to biological function and disease

Module 2 : Building, Visualising and Exploring Networks

Biological Network Analysis

- Build biological networks using multiple construction approaches
- Visualise and explore networks using Cytoscape effectively
- Use heatmaps to represent complex biological relationships

Module 3 : Dynamic Systems and Disease Networks

Biological Network Analysis

- Model biological systems using ordinary differential equations
- Apply Bayesian inference to biological network uncertainty
- Work through a real ovarian cancer network case study

Module 1 : Genomics and Transcriptomics

Multi-Omics and Systems Biology

- Process NGS data and perform differential gene expression analysis
- Understand transcriptomics workflows connecting to broader omics
- Interpret genomic and transcriptomic outputs together

Module 2 : Proteomics, Metabolomics and Their Data

Multi-Omics and Systems Biology

- Understand mass spectrometry and how proteomic data is processed
- Work through metabolomics techniques and data analysis
- Connect proteomic and metabolomic data to genomic layers

CURRICULUM

Module 3 : Biomarkers, Integration and Disease App.

Multi-Omics and Systems Biology

- Apply biomarker discovery to identify signals across omics layers
- Integrate multi-omics datasets for systems-level biological view
- Use predictive AI modelling within a systems biology context

Module 1 : Introduction to AI and ML

AI and ML for Biological Data

- Understand machine learning foundations including regression algorithms
- Learn how neural networks learn from biological data
- Connect AI and ML concepts to biological data problems

Module 2 : Building and Running AI Pipelines

AI and ML for Biological Data

- Build end-to-end AI pipelines using Nextflow for biological workflows
- Implement CI/CD practices and API inference for model deployment
- Set up model monitoring to track performance in production

Module 3 : Computing Environments and Data Handling

AI and ML for Biological Data

- Set up and navigate a Linux environment for biological data science
- Manage files, wrangle datasets, and prepare data for analysis
- Apply version control to keep code organised and reproducible

Phase 1 : Project Initiation to Analysis

Capstone

- Define your problem, identify datasets, and set up your project framework
- Collect, clean, and preprocess biological data for analysis
- Apply analytical techniques and refine direction with mentor feedback

Phase 2 : Interpretation to Final Submission

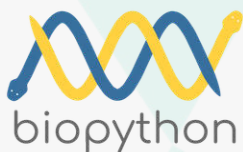
Capstone

- Translate analytical outputs into meaningful biological conclusions
- Compile analysis and interpretation into a structured draft for review
- Submit a complete portfolio-ready project demonstrating end-to-end capability

Master **15+ softwares and tools** used in the Biotechnology industry

Immerse yourself in the realm of Biotechnology with our specialized programme designed to empower you with expertise in over **15 essential software and tools** driving the industry forward. From **advanced data analysis platforms to genetic engineering software**, our comprehensive curriculum ensures you are adept at utilizing the latest technological advancements that shape the field of Biotechnology.

Through hands-on training and real-world applications, you will develop the practical skills necessary to **excel in research, drug discovery, and biotech product development**. Stay ahead of the curve and unlock a world of possibilities with our industry-focused programme.

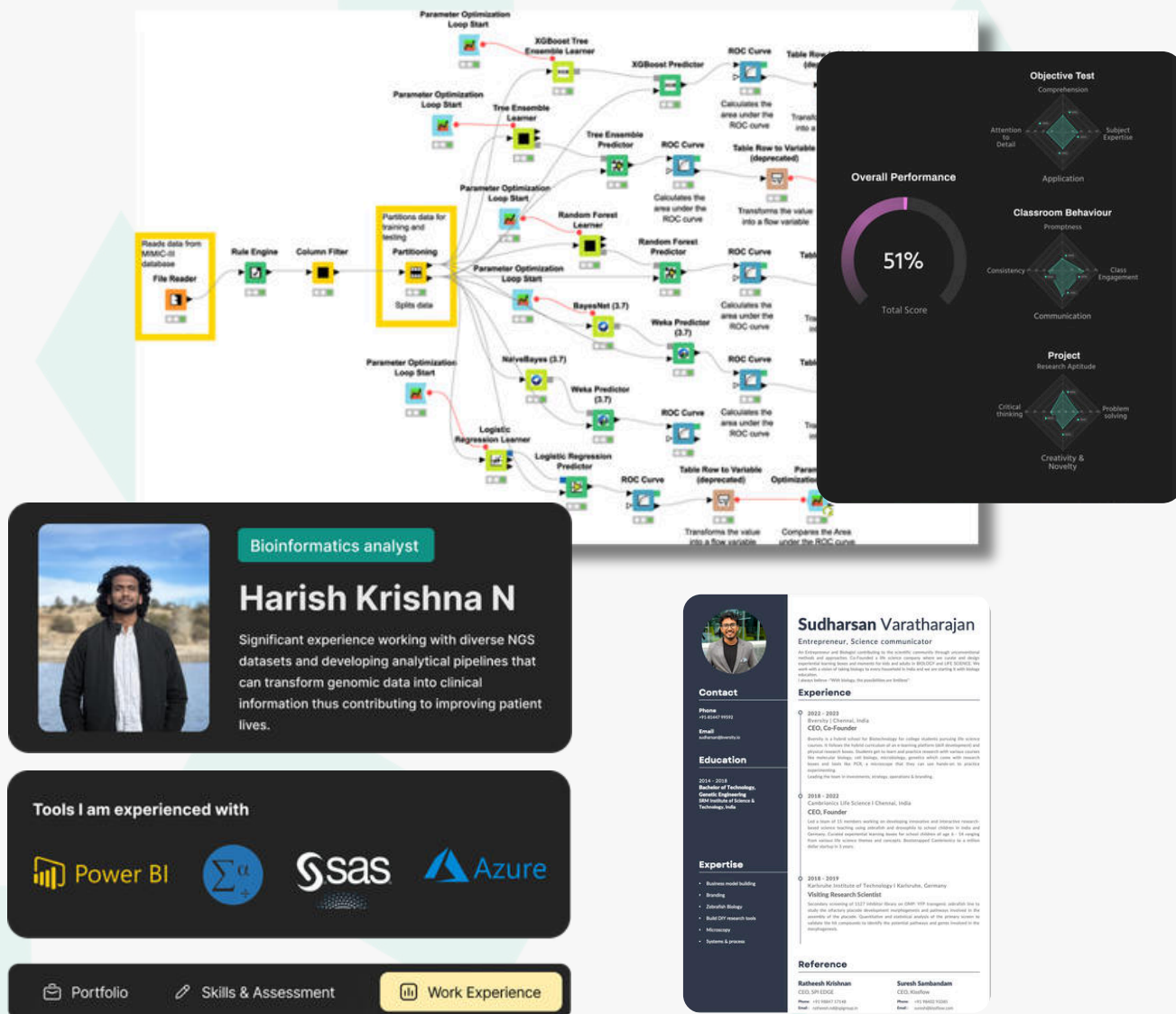


WE GO BEYOND

Portfolio and Resume

At Bversity, we understand the importance of creating a **strong identity for a biotechnologist**. Our comprehensive curriculum and hands-on projects empower students to develop a **compelling portfolio** and **resume** that highlights their unique skills, experiences, and accomplishments.

Our students confidently showcase their potential to employers, **positioning themselves as top candidates** in the competitive biotech industry.



EXPERT MENTORS

Mentor panel

Meet our **experienced faculty** at Bversity who are dedicated to providing personalized mentorship and leading students towards success in the field of bioinformatics.

Uma Chauhan



BIOINFORMATICIAN
NGS & ML Expert



Apoorva Mishra



LEAD
Data Scientist



Naina Goel



SENIOR
Data Scientist



Berty Ashley



BUILT
Cure for DMD



Bhavana Krishnan



BIOINFORMATICS
Data Engineer



Manisha Bhardwaj



BUILT
Proteomics apps



and many more industry experts as mentors

Biversity works with some of the **leading Biotech firms** in India

At Biversity, we work closely with leading biotech and bioinformatics companies to ensure our learners are not just programme-ready but industry-ready, with the exposure, connections, and support that turn learning into a career.



As featured in

A|M|S

*“One industry facing particular skills shortages is the life sciences. Industry trade group Pharmaceutical Research and Manufacturers of America (PhRMA) warned that the US would **need to hire 3.4 million employees** to meet demand in life sciences and biotech by 2025, but that 60% of those jobs would be vacant due to **skills shortages, a lack of effective education policies** and increased competition for talent from other countries.”*



CERTIFICATION

You get a **PG certificate** **certified** by **IITM Pravartak**

Upon successful completion of the program, you will earn a PG certificate in Bioinformatics, Genomics & Data Science, certified by IITM Pravartak (IIT Madras Technology Innovation Hub, Govt. of India).

This certification reflects your ability to work with industry-relevant bioinformatics tools, genomic data workflows, and applied data science concepts.



ADMISSION PROCESS & FEE

A streamlined and easy admission process

Step 1

Online application

Submit the online application along with the required documents

Step 2

Resume submission

Shortlisted candidates will be required to submit their resume for evaluation

Step 3

1:1 interview

Shortlisted candidates will be invited for an online interview

Step 4

Admission letter

Selected candidates will receive an offer of admission to the programme



Eligibility

- MSc, BTech, and MTech graduates in Life Sciences / Biotechnology / related fields
- Working professionals with 1–3 years of experience looking to transition into bioinformatics

At the end of 6 months, you will have:

- 6-month Industry PG Program
- Work on hands-on projects using real-world datasets
- Build a portfolio aligned with bioinformatics roles
- Learn industry-relevant tools and workflows
- Industry experts as your mentors
- Placement assistance included

Total program fee

INR 1,40,000
(Inclusive of GST)

Learn With Easy installments & EMI Plans

The credit facility is provided by a third party credit facility provider and any arrangement with such third party is outside Bversity's purview.

Hear our community talk about their **industry journeys**

Dristi Mohta
Bioinformatician



Arpita Ganguly
Bioinformatics
Engineer



Ananaya Jain
Bioinformatician



Kayalvizhi
Bioinformatician



Risha Reddy
Bioinformatician



Laxmi Manojkumar
Bioinformatician
Trainee





Empowering **next-gen** Biotechnologists

Join our prestigious PG programme in Bioinformatics, and embark on a transformative journey where cutting-edge research, interdisciplinary learning, and real-world applications converge to shape the future of bioinformatics and computational biology

Start Application

To know more about enrollments contact us
at **+91 7845133745** and
admission@biversity.io



www.biversity.io