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खंडवा रोड, सिमरोल, इन्दौर – 453 552, मध्य प्रदेश, भारत
IITI DRISHTI CPS Foundation, Indian Institute of Technology Indore
Khandwa Road, Simrol, Indore - 453 552, Madhya Pradesh, India
CIN: U73100MP2020NPL054322

IITI DRISHTI CPS FOUNDATION
(A Section 8 - Not for Profit Company)

Advt. No. – IITI-DRISHTI-CPS/Sec-8/2026/32 Date: 17th November 2026

IITI DRISHTI CPS Foundation is a Technology Translation Research Park (TTRP) hosted at IIT Indore and supported by the Department of Science & Technology (DST), Government of India. The Foundation focuses on Digital Healthcare, Cyber-Physical Systems, system simulation and modelling, translational research, and commercialization of deep-tech innovations. The Foundation works closely with researchers, clinicians, hospitals, healthcare institutions, government bodies, and industry partners to translate technologies from early-stage research to large-scale deployment and commercialization. One of the flagship platforms developed in-house is CharakDT, a rapidly evolving Digital Health and Clinical Decision Support ecosystem. More details about the company are available at: https://drishticps.org/

Job Title: Data Scientist (Bioinformatics)
Job Location: IIT Indore
No. of Positions: 1
Duration: One year, subject to change as per project requirements.

Job Summary:

IITI DRISHTI CPS Foundation invites applications for the position of Data Scientist - Bioinformatics to lead advanced computational research involving genomics, transcriptomics, multi-omics integration, biomarker discovery, and predictive modelling using complex biomedical datasets.

The selected candidate will be responsible for designing and validating bioinformatics analysis strategies, developing scalable NGS pipelines, integrating molecular findings with clinical and morphometric measurements, and investigating molecular signatures associated with disease progression and patient outcomes.

The role requires independent scientific judgement, advanced computational expertise, and the ability to coordinate interdisciplinary research activities while contributing to multiple biomedical research projects.

Roles and Responsibilities

- Design, develop, validate, and oversee comprehensive bioinformatics pipelines for WGS, WES, targeted sequencing, RNA-seq, and other relevant omics technologies.
- Lead genomic variant analysis, transcriptomic profiling, differential expression analysis, functional enrichment, and molecular pathway interpretation.
- Develop analytical strategies for identifying and validating candidate genomic, transcriptomic, and multi-omics biomarkers associated with disease mechanisms and clinical outcomes.
- Design frameworks for integrating molecular datasets with clinical records, quantitative morphometric measurements, imaging-derived features, and other biomedical parameters.
- Apply advanced biostatistics, multivariate modelling, machine learning, and feature selection methods for biomarker discovery and prognostic stratification.
- Develop, evaluate, and interpret predictive models using integrated genomic, transcriptomic, clinical, and multimodal datasets.
- Establish robust approaches for quality control, batch-effect correction, missing-data handling, statistical validation, and reproducibility across multicentre datasets.
- Optimise bioinformatics pipelines for computational efficiency, scalability, automation, and deployment using HPC or cloud infrastructure.
- Define bioinformatics analysis plans, sequencing data requirements, validation strategies, and computational research methodologies in collaboration with investigators.
- Guide junior researchers and technical personnel in bioinformatics workflows, statistical analysis, and scientific interpretation.
- Collaborate with clinicians, molecular biologists, data scientists, and software developers to translate computational findings into clinically relevant research outputs.
- Lead or substantially contribute to scientific manuscripts, grant proposals, technical reports, research presentations, and the development of computational research methodologies.
- Support the planning and execution of bioinformatics activities across multiple biomedical research projects.

Key Required Skills & Competencies:

- Advanced knowledge of genomics, transcriptomics, molecular biology, human genetics, and NGS technologies.
- Demonstrated experience designing and implementing end-to-end NGS analysis pipelines.
- Strong programming proficiency in Python and R, including statistical computing, algorithm development, and automation.
- Expertise in Linux, Bash scripting, workflow management, and reproducible computational research.

- Practical experience with tools such as GATK, bcftools, VEP, STAR, DESeq2, edgeR, GSEA, or equivalent analytical frameworks.
- Strong understanding of biostatistics, multivariate analysis, regression, multiple-testing correction, and computational biomarker discovery.
- Experience with machine learning, predictive modelling, model validation, and interpretation of biomedical datasets.
- Familiarity with public genomic databases, reference resources, and biological pathway analysis.
- Ability to independently formulate research questions, design computational experiments, and interpret complex biological findings.

Preferred Skills:

- Experience with multi-omics integration, systems biology, or clinical genomics.
- Research experience in neurological disorders, neurogenomics, traumatic brain injury, or other clinically relevant disease areas.
- Expertise in integrating genomic, clinical, morphometric, and imaging-derived datasets.
- Experience with Nextflow, Snakemake, Docker, Git, HPC, and cloud computing platforms.
- Familiarity with single-cell RNA-seq, spatial transcriptomics, or other advanced sequencing technologies.
- Experience developing interpretable AI/ML models for biomarker discovery, disease classification, or outcome prediction.
- Publications in peer-reviewed journals and experience coordinating multidisciplinary research projects.

Qualifications & Experience

Education: Ph.D. in Bioinformatics, Computational Biology, Genomics, Genetics, Biotechnology, Biomedical Informatics, or a closely related discipline from a recognised institution with relevant experience in computational genomics, NGS data analysis, multi-omics, or biomedical data science. Additional postdoctoral or industry research experience will be preferred.

OR,

M.Sc./M.Tech. in Bioinformatics, Computational Biology, Biotechnology, Genomics, Genetics, Biomedical Informatics, or a related discipline from a recognised institution.

Experience: 1 to 3 years of relevant research or professional experience. Candidates with strong practical experience through dissertations, internships, or research projects may also be considered.

Additional Requirements or Preferences:

- Proposed Timeline for joining: Immediate / Within 30 days

Compensation: As per Industry Standards.

Interested candidates may click here to submit the application.

Only shortlisted candidates will be called for a written test/interaction/interview. Mere fulfillment of the eligibility criteria does not entitle an applicant to be shortlisted. All the applications will be thoroughly evaluated for suitability with the company's requirements. The company reserves the right to not fill up /cancel the post advertised without assigning any reason. In the case of selection, the role will be finalized by the selection panel and the decision will be binding. The position is contractual, full-time in nature and subject to periodic performance reviews.