

Centre of Excellence in Computational Genomics

Internship Modules for Engineering students

1. Design and development of protocol for detecting alternative spliced regions using RNA seq data in colorectal cancers
2. Development of database for analysed and curated colorectal cancer exome datasets
3. Design of decision support tool using AIML for colorectal cancer exome datasets
4. DFT (Density Function Theory) analysis for Covid-19 induced mucormycosis
5. Modifying and designing a Mutation Visualization (MutVis) tool for visualization of mutational signatures in pathogenic bacteria
6. Prediction of Protein-Protein Interactions via ESM-1nv
7. Unlocking Protein Language Models for Drug Discovery with ESM-1nv
8. Facilitating Protein Design with ProtT5nv
9. Design of novel drug like candidates using MegamolBART
10. Predict ADMET properties using MegamolBART
11. Synteny mapping for mulberry: assigning pseudo chromosomes
12. A protocol development for Metatranscriptomics
13. Predicting the likelihood of developing long Covid (PASC) in the indian population
14. SNP genotyping chip development for Mulberry (*Morus indica*)
15. Quantum Computing based peptide folding using Quantum Annealers
16. Evaluating role of Quantum Bayesian phase difference estimation in peptide folding
17. Development of protein disorderedness database
18. Design and Development of novel PROTAC linker compounds
19. Digitized-counterdiabatic quantum approximate optimization algorithm in molecular docking
20. Analysis of QTL markers for finding the potential biomarkers for Yield and drought stress
21. Consensus generation for Mulberry samples
22. Comparative genomics of Mulberry
23. Soil metagenome analysis and finding the potential biofertilizers
24. Pipeline for the metabolomic profiling for the mulberry samples

Centre of Excellence in Computational Genomics

Internship Modules for Engineering students

26. Novel Polymer Micelles as Carriers to Target Pancreatic Ductal Adenocarcinoma [PDAC]
27. Computational Design and Optimization of Antibody-Drug Conjugates: A Virtual Approach to Targeted Cancer Therapy
28. Targeting mRNA with Small Molecules: A Promising Strategy for Therapeutic Intervention
29. Probiotic Interventions for Enhancing Growth and Development: Mechanisms and Applications
30. ML approach for LSD data
31. Image processing and the data interpretation on wildlife data using camera traps and other methods.
32. ML approach for the real time quality of soil and their benefits to the farmers.
33. Biostatistics for the sustainable development goals: Development of mathematical models for the real time data of environment, food, energy, well being
34. Develop a smart kitchen system using ML algorithms that effectively detects food spoilage
35. Developing Mapreduce Algorithms for Next Generation Sequencing Data
36. Identifying the Antidiabetic targets using NGS data
37. Predicting Protein Secondary structure using a Neural Network.

For Further Information Contact:

Dr. Manjunatha Reddy
Associate Professor
Dept of Bio-Technology
Email ID: ahmanjunatha@rvce.edu.in
Mob: 9945465657