ADWIKA PP

Padinhare purayil PO Mottammal Kannapuram Kannur, kerala

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in https://www.linkedin.com/in/adwika-pp-143b62211

Sir,

I am writing to express my keen interest in potential job vaccancies. As a recent MSc Bioinformatics graduate ,I am particularly enthusiastic about leveraging advanced computational approaches to unravel the intricate mechanisms underlying complex diseases.

During my MSc thesis, titled "Identification of Differentially Expressed Genes and SNP Studies Associated with Hypoxia in COVID-19," I gained extensive experience in NGS data analysis and the identification of genetic factors contributing to disease phenotypes. This project not only enhanced my technical skills but also deepened my understanding of the importance of NGS in unraveling the complexities of diseases.

This project required me to utilize tools such as DESeq2, HISAT, BCFTOOLS, DAVID, STRING, Annover, clinvar, dbsnp, snpEff to perform mapping, differential gene expression analysis, variant calling, annotate genetic variants, functional analysis, pathway analysis, network analysis, and hub gene identification. Through these analyses, I gained a deep understanding of the intricate mechanisms underlying hypoxia-related conditions and their potential implications for disease progression and treatment.

During my undergraduate studies in Zoology, I have done a project titled "Inventory on Ectoparasites of Domestic Animals." This project allowed me to explore and document the diverse range of ectoparasites that infest domestic animals. Through fieldwork, I conducted surveys and collected samples from various animal species, including companion animals and livestock. I utilized microscopic techniques, identification keys, and molecular tools to identify and classify different ectoparasite species. This project not only enhanced my knowledge of parasitology but also honed my skills in data collection, analysis, and scientific communication.

I am well-versed in the preprocessing, quality control, alignment, variant calling, and downstream analysis steps involved in NGS data analysis, enabling me to extract meaningful biological insights from large-scale genomic datasets. Building upon my previous work, my research interest lies in integrating diverse genomic datasets and employing advanced bioinformatics tools to decipher the molecular basis of complex diseases. In Particular, I aim to investigate the interplay between genetic variations, gene expression patterns, and disease phenotypes through the integrative analysis of multi-omics data, including genomics,transcriptomics, and epigenomics.

By applying state-of-the-art computational approaches, such as differential gene expression analysis, Pathway enrichment analysis, and functional annotation, I intend to identify key molecular players, potential therapeutic targets, and biological pathways associated with the development and progression of complex diseases. I am particularly excited about exploring the role of non-coding RNAs, genetic variants, and epigenetic modifications in disease pathogenesis.

Moreover, I am proficient in utilizing programming languages such as Perl, Python, C and R, along with various Bioinformatics tools such as AutoDock, Pymol, Mercury, Modelar etc and databases such as NCBI, Ensembl, Uniprot, Pubmed, KEGG etc. My strong analytical skills, attention to detail, and ability to collaborate effectively within multidisciplinary teams will enable me to contribute to ongoing research Projects.

I am highly motivated to work in a vibrant research environment and contribute to cutting-edge studies that bridge the gap between computational analysis and translational research. I am confident that my expertise in NGS data analysis and my passion for understanding the molecular underpinnings of complex diseases make me an ideal candidate for this position.

Thank you for considering my application. I am attaching my resume with this. I am eager to further discuss my research interests and how I can contribute to the esteemed research endeavors.

Sincerely,
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Objective

To apply my expertise in bioinformatics and computational analysis to contribute to cutting-edge research and advancements in the field of life sciences, with a focus on genomics, proteomics, and data-driven discoveries. Seeking a challenging position that allows me to utilize my technical skills, analytical mindset, and passion for biology to drive innovation and make a meaningful impact in the field of bioinformatics.

Education

- **Pondicherry University**   2023
  Msc Bioinformatics
  8.4

- **Kannur University**   2020
  Bsc Zoology
  81 %

- **GHSS CHERUKUNNU**   2017
  Plus two
  89 %

- **Najath Girls HS Mattool**   2015
  SSLC
  95 %

Skills

- NGS
- Docking
- Python
- R
- Perl
- Java
- Ms word
- Ms Excel
- Ms PowerPoint
- MySQL
- Microarray

Projects

- **Identification of differentially expressed genes and SNP studies associated with hypoxia in COVID-19 patients**
  Completed the project as a part of requirement for the degree of Master of science in bioinformatics in the year 2023.

  Objective: To investigate the molecular mechanisms underlying hypoxia in COVID-19 patients using Next-Generation Sequencing (NGS) techniques, and identify differentially expressed genes and SNPs associated with this condition.

  Highlights : Used RNA seq data for the study. Performed differential gene expression analysis, variant calling, functional analysis, pathway analysis, network analysis, and hub gene identification.

- **Inventory on ectoparasites of domestic animals .**

Completed the project as a part of requirement for the degree of bachelor of science in zoology in the year 2020.

Achievements & Awards

- Won academic excellence award from Sir Syed college at the year 2019 and 2020

Languages

- Malayalam
- English
- Hindi
- Tamil

Reference

- **Dr M Suresh Kumar - Department of bioinformatics,Pondicherry University**
  Professor
  suresh@bicpu.edu.in

- **Dr R Krishna - Department of bioinformatics, Pondicherry University**
  Proffesor
  krishna@bicpu.edu.in

Bioinformatics Tools

- Deseq2
- HISAT
- Vcf tools
- Blast
- Fastqc
- MEGA
- Annovar

Bioinformatics Software

- AutoDock
- Cytoscape
- Pymol
- Wingx
- Mercury
- Modeller

Database

- NCBI
- KEGG
- Uniprot
- Pubmed
- Ensembl
- String
- David
- Clinvar
- dbSNP
- snpEff

Certifications

- **Python for data science and AI**
  IBM Developer skills Network

Certified for completing the course Python for data science and AI.

- **Essentials of Excel**
  Certified for completion of Digisaksham program, A joint Digital skill initiative by ministry of Labour and Employment and Microsoft on Essential of Excel coursework in academic year 2022-2023.
- **Tcs ion career edge - young professionals**
  Cert Id: 4-7818271-1016
  Certified for completing the course held by Tcs ion on may 2020.

Declaration

- I hereby declare that the above - mentioned details furnished by me are true and correct to the best of my knowledge and belief

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