

## **Bioinformatician**

### **Job ID**

109032

### **Location**

Clemson University

### **Job Code**

UK0700

### **Full/Part Time**

Full-Time

### **Regular/Temporary**

Temporary - Time Limited

### **JOB SUMMARY:**

The successful candidate will join a program that develops and applies innovative methods and tools to deliver insights for research and development advancement **linking crop conservation, improvement, and utilization**. They will combine multi-omics and data science with cutting-edge phenomic technologies to conserve and subsequently discover, optimize, and introgress novel traits from genebank collections for transfer to pre-breeding or breeding programs. Through this role they will lead the generation of high-quality structural and functional genomic resources for complex species, contribute to discover genes (and associated traits) ultimately enabling the geneticists, breeders, and related disciplinary scientists to improve crop resilience (biotic and abiotic stress resistance) and quality. The position will be located at Clemson University.

### **JOB DUTIES:**

#### **40% - Non-Essential:**

- Design and execute genomics experiments, analyses, pipelines, and workflows to solve complex biological problems leading to discovery of novel candidate genes and phenotypes
- Deliver computational biology expertise to elucidate the modes of action of genes affecting crop resilience or quality
- Perform phylogenomics and comparative genomics analysis using genome sequence data to predict sequence-structure-function relationships
- Deliver detailed manual review and curation of target gene models to support target validation through gene editing

#### **30% - Essential:**

- Deliver high quality, comprehensive structural and functional genome annotations
- Integrate and analyze multiple datatypes in the context of experimental observations with a goal towards formulating testable hypothesis

### **30% - Essential:**

Communicate the results, interpretations and conclusions of data analysis projects including the confidence of predictions and suggest relevant/potential experiments for confirming computational analysis-based predictions

- Publishes in high-impact, peer-reviewed journals
- Develops and/or collaborate with research teams to apply for research grant opportunities
- Keeps abreast of current scientific advancement and attends supervisor-approved meetings, workshops, and conferences
- Organizes experimental progress in the form suitable for oral presentation or posters for scientific meetings

### **MINIMUM REQUIREMENTS:**

**Education:** Doctoral / Professional Degree - PhD in Bioinformatics, Computational Biology, Functional Genomics or Computer Science. At least two years of work experience will be given preference.

- Strong experience with computational gene prediction and genome annotation in crops
- Strong experience in agricultural systems biology and plant sciences
- Strong experience with computational genomics, protein sequence-structure-function analysis, phylogenomics analysis, evolutionary and comparative genomics analysis methods
- Strong experience in Python or R programming languages for statistics or scientific programming. Experience in additional programming languages and technologies is a plus.
- Demonstrated experience in the development of large-scale, reproducible computational biology pipelines using version control and workflow managers
- Demonstrated experience in high performance computing and cloud technologies
- Strong critical thinking and problem-solving skills, flexibility, and committed to learning broadly across relevant disciplines
- Strong organizational, interpersonal and communication skills (oral and written) are expected

### **PREFERRED REQUIREMENTS:**

Python or R programming languages for statistics or scientific programming. Experience in additional programming languages and technologies is a plus. Demonstrated experience in the development of large-scale, reproducible computational biology pipelines using version control and workflow managers. Demonstrated experience in high performance computing and cloud

technologies. Strong critical thinking and problem-solving skills, flexibility, and committed to learning broadly across relevant disciplines.

Strong organizational, interpersonal and communication skills (oral and written) are expected

## **RESPONSIBILITIES**

### **JOB KNOWLEDGE**

Firm Job Knowledge - Firm working knowledge of concepts, practices and procedures and ability to use in varied situations

### **SUPERVISORY RESPONSIBILITIES**

No Supervisory Duties - Not responsible for supervising employees.

### **BUDGETARY RESPONSIBILITIES**

No Budget Responsibilities - No fiscal responsibility for the department's budget.

## **PHYSICAL REQUIREMENTS:**

15% - Walk or move about

75% - Use hands or feet to operate or handle machinery, equipment, etc

80% - Communicate, converse, give direction, express oneself

80% - Recognize or inspect visually

35% - Move, transport, raise or lower

75% - Extends hands or arms in any direction

85% - Perceive, observe, clarity of vision

## **WORKING CONDITIONS:**

5% - Overnight Travel

## **WORK SCHEDULE:**

**Standard Hours:** 37.5

## **COMPENSATION INFORMATION**

Expected Budget Range: ( \$89,600.00 - \$90,000.00 )

Salary is dependent upon several factors including, but not limited to, a candidate's previous experience, knowledge, skills and performance in accordance with Clemson's [compensation guidelines](#).

## **ESSENTIAL PERSONNEL LEVEL**

Normal Operations

Required to follow emergency facility closure directives, and not normally expected work on-site during emergency situations.

**JOB LOCATION:**

Clemson, SC

**APPLICATION DEADLINE:**

October 9, 2024

**MILITARY AND VETERAN:**

**MILITARY EQUIVALENCY:**

Clemson University is proud to allow educational equivalency for military technical certifications and trainings that directly relate to the job duties.

**VETERAN PREFERENCE:**

South Carolina is making our Veterans a priority for employment in state agencies and institutions.

State policy for veteran preference states that for qualifying, full-time permanent positions, a veteran applicant may receive preference if they meet the job's minimum qualifications, were discharged under honorable conditions from the military, and submit their DD-214 for confidential review by the Office of Human Resources.

To claim Veteran Preference for qualifying positions, email [hrjob@clemson.edu](mailto:hrjob@clemson.edu) upon submission of your application.

**CLOSING STATEMENT:**

Clemson University is an AA/EEO employer and does not discriminate against any person or group on the basis of age, color, disability, gender, pregnancy, national origin, race, religion, sexual orientation, veteran status or genetic information.