Opportunity Title: CDC Data Scientist Fellowship
Opportunity Reference Code: CDC-NCEZID-DHCPP-2022-0364

Organization	Centers for Disease Control and Prevention (CDC)
Reference Code	CDC-NCEZID-DHCPP-2022-0364
How to Apply	***Connect with ORISE...on the GO!*** Download the new ORISE GO mobile app in the Apple App Store or Google Play Store to help you stay engaged, connected, and informed during your ORISE experience and beyond! A complete application consists of: • An application • Transcripts – Click here for detailed information about acceptable transcripts • A current resume/CV, including academic history, employment history, relevant experiences, and publication list • One educational or professional recommendation. Your application will be considered incomplete, and will not be reviewed until one recommendation is submitted. All documents must be in English or include an official English translation.
Application Deadline	12/19/2022 3:00:00 PM Eastern Time Zone
Description	***Applications will be reviewed on a rolling-basis.** **CDC Office and Location**: A research and training opportunity is available in the Bacterial Special Pathogens Branch (BSPB), Division of High-Consequence Pathogens and Pathology (DHCPP) of the National Centers for Emerging and Zoonotic Infectious Diseases (NCEZID) at the Centers for Disease Control and Prevention (CDC) located in Atlanta, Georgia. **Partial or fully remote work is available following https://orise.orau.gov/usda-ars/documents/orise-virtual-remote-mentor-guide.pdf** The Centers for Disease Control and Prevention (CDC) is one of the major operation components of the Department of Health and Human Services. CDC works to protect America from health, safety and security threats, both foreign and in the U.S. Whether diseases start at home or abroad, are chronic or acute, curable or preventable, human error or deliberate attack, CDC fights disease and supports communities and citizens to do the same. BSPB serves as a national reference laboratory for several high consequence bacterial pathogens, including Bacillus anthracis, Burkholderia mallei and pseudomallei, Brucella spp., as well as over 500 rare and unusual bacterial pathogens. A major component of the work done within BSPB is developing and maintaining bioinformatic tools to assist BSPB and its partners (both national and international) to investigate outbreaks, conduct surveillance, and identify novel species of bacterial pathogens. **Research Project:** BSPB is looking for a candidate to participate

in data management, bioinformatic pipeline development, analysis and visualization projects related to genomic and metagenomic data for bacterial pathogens. The fellow will conduct research on containerizing specialized bioinformatic pipelines, currently in use within the branch, so that standardized bioinformatic tools may be deployed to partner labs unable to perform their own genomic analysis. This will increase both national and international capacity and ensure that genomic analysis is being performed in a consistent and reproducible manner between multiple laboratories. The fellow will also collaborate with MicrobeNet, a free online virtual reference laboratory run within BSPB, to create an organized state and national surveillance network of diseases which are not currently captured by active systems.

Learning Objectives:

- Knowledge and awareness of the basic principles and concepts of biology, computer science, IT engineering, and mathematics
- Using software effectively to extract information from large databases and to use this information in computer modeling
- Problem-solving skills, including the ability to develop new algorithms and analysis methods
- An understanding of the intersection of life and information sciences, the core of shared concepts, language and skills the ability to speak the language of structure-function relationships, information theory, gene expression, and database queries

Mentor(s): The mentor(s) for this opportunity is Zachary Weiner (xxd7@cdc.gov). Please contact them if you have questions about the nature of this research.

Anticipated Appointment Start Date: January 1, 2023. Start date is flexible and will depend on a variety of factors.

Appointment Length: The appointment will initially be for one year, but may be renewed upon recommendation of CDC and is contingent on the availability of funds.

Level of Participation: The appointment is full-time.

Participant Stipend: The participant will receive a monthly stipend commensurate with educational level and experience.

Citizenship Requirements: This opportunity is available to U.S. citizens, Lawful Permanent Residents (LPR), and foreign nationals. Non-U.S. citizen applicants should refer to the Guidelines for Non-U.S. Citizens Details page of the program website for information about the valid immigration statuses that are acceptable for program participation.

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ORISE Information: This program, administered by ORAU through its contract with the U.S. Department of Energy (DOE) to manage the Oak Ridge Institute for Science and Education (ORISE), was established through an interagency agreement between DOE and CDC. Participants do not become employees of CDC, DOE or the program administrator, and there are no employment-related benefits. Proof of health insurance is required for participation in this program. Health insurance can be obtained through ORISE.

The successful applicant(s) will be required to comply with Environmental, Safety and Health (ES&H) requirements of the hosting facility, including but not limited to, COVID-19 requirements (e.g. facial covering, physical distancing, testing, vaccination).

Questions: Please visit our Program Website. After reading, if you have additional questions about the application process please email ORISE.CDC.NCEZID@orau.org and include the reference code for this opportunity.

Qualifications

The qualified candidate should have received a bachelors, master's, or doctoral degree in one of the relevant fields (e.g. Bioinformatics), or be currently pursuing one of the degrees with completion by January 1, 2023. The most recent degree must have been received in the past five years.

Preferred Skills:

- Proficient in Linux
- Proficient in Bash and Python scripting
- Experience with package managers and compiling from source
- Use of project version control with git Public health informatics majors
- Understanding of generating computer algorithms for disease trends
- Informatics experience, including software applications for public health analysis.
- Background in information technology
- Communications skills and a desire to learn and grow

Eligibility Requirements

- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or anticipated to be received by 1/31/2023 11:59:00 PM.
- **Discipline(s):**
  - **Chemistry and Materials Sciences** (12 👁)
  - **Computer, Information, and Data Sciences** (17 👁)
  - **Engineering** (1 👁)
  - **Life Health and Medical Sciences** (14 👁)
  - **Mathematics and Statistics** (3 👁)

Affirmation

I certify that I have not previously been employed by CDC or by

a contractor working directly for CDC. I understand that CDC does not permit individuals with a prior employment relationship with CDC or its contractors to participate as trainees in the ORISE program. (Exceptions may be granted for individuals who, since the previous CDC employment, have obtained a new STEM degree which necessitates training in a new field.)