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Opportunity Title: CDC Influenza Informatics and Epidemiology Data Science Fellowship
Opportunity Reference Code: CDC-ID-2020-0166

Organization Centers for Disease Control and Prevention (CDC)

Reference Code CDC-ID-2020-0166

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.

If you have questions, send an email to ORISE.CDC.NCIRD@orau.org. Please include the reference code for this opportunity in your email.

Application Deadline 8/27/2020 3:00:00 PM Eastern Time Zone

Description ***Applications will be reviewed on a rolling-basis.**

One research opportunity is currently available within the Influenza Division (ID), National Center for Immunization and Respiratory Diseases (NCIRD), at the Centers for Disease Control and Prevention (CDC) located in Atlanta, Georgia. In collaboration with domestic and global partners, ID performs influenza surveillance, aids in influenza diagnosis, and is a leader in influenza virus characterization and control efforts. Presently, the Influenza Division is closely engaged in laboratory and epidemiological support for the COVID-19 pandemic response.

This available project offers a unique opportunity to train across two distinct teams in the CDC ID: The Domestic Surveillance Team in the Epidemiology and Prevention Branch and the division's Informatics Group. The ID Informatics Group and Epi Surveillance Team are collaborating on foundational projects to capture and advance direct device reporting of influenza and other respiratory disease testing results for national surveillance purposes. Within this dual team setting, the participant will have access to mentors with combined expertise totaling decades of experience in influenza epidemiological surveillance and applied bioinformatics.

The participant will have multiple advanced training opportunities within the direct device reporting space. In particular, training will be provided on the existing infrastructure that currently supports public health laboratory reporting of influenza, vaccine-preventable disease results, and next-generation sequencing results from domestic influenza reference centers. In the course of piloting direct device reporting strategies and participating in associated data analytics, the participant could also have opportunities to collaborate with other divisions and teams involved in the COVID-19 response. Importantly, the participant will be involved in technical discussions between CDC and informatics contacts from the Association of Public Health Laboratories (APHL), which in initial stages will include APHL/CDC finalizing data usage agreements with device manufacturers. APHL maintains a cloud-based informatics infrastructure, the APHL Informatics Messaging Services (AIMS) platform, which combined with CDC and the participant's technical experience could be leveraged to enable the integration of direct device reporting. The participant will also have

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opportunities to engage in data integration efforts, including training on the use of distributed computing approaches within a Hadoop ecosystem. This multidisciplinary project and exploratory analyses conducted by the participant could ultimately contribute to increased flexibility and automation of pathogen-agnostic reporting mechanisms with real-time laboratory result streaming capabilities.

Anticipated Appointment Start Date: August 17, 2020

This program, administered by ORAU through its contract with the U.S. Department of Energy to manage the Oak Ridge Institute for Science and Education, was established through an interagency agreement between DOE and CDC. The initial appointment can be up to one year, but may be renewed upon recommendation of CDC contingent on the availability of funds. The participant will receive a monthly stipend commensurate with educational level and experience. Proof of health insurance is required for participation in this program. The appointment is full-time at CDC in the Atlanta, Georgia, area. Participants do not become employees of CDC, DOE or the program administrator, and there are no employment-related benefits.

Qualifications

The qualified candidate should be currently pursuing or have received a master's or doctoral degree in one of the relevant fields. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Proficiency in at least one programming or scripting language (Python, R, Java, Perl, Scala)
- Training or experience using Structured Query Language (SQL)
- Working knowledge of Linux command-line operations
- Experience in one or more of the following areas is strongly preferred:
  - Strong programming fundamentals or computer science background
  - Cloud computing; experience with AWS platforms
  - Messaging technologies; Mirth/NextGen or other stream processing capabilities
  - Database development experience; SQL knowledge
  - Visualization experience; working experience with ArcGIS tools
  - Understanding of diagnostic testing and other laboratory methods
  - Statistics and epidemiology background

Eligibility Requirements

- **Degree:** Master's Degree or Doctoral Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (5 👁)
  - **Engineering** (1 👁)
  - **Life Health and Medical Sciences** (13 👁)
  - **Mathematics and Statistics** (2 👁)