Opportunity Title: CDC Influenza Data Science Fellowship
Opportunity Reference Code: CDC-ID-2020-0016

Organization Centers for Disease Control and Prevention (CDC)

Reference Code CDC-ID-2020-0016

How to Apply

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 12/11/2019 3:00:00 PM Eastern Time Zone

Description

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

A research opportunity is currently available within the Influenza Division (ID), in the National Center for Immunization and Respiratory Diseases (NCIRD) at the Centers for Disease Control and Prevention (CDC) located in Atlanta, Georgia. ID performs domestic and international influenza surveillance, aids in influenza diagnosis, and is a leader in influenza virus characterization and control efforts.

The Influenza Division's Office of the Director (ID/OD) Informatics Group performs cross-cutting work spanning multiple areas, including the development of computational methods, data integration and enrichment, statistical analysis, laboratory automation, system management, special R&D projects, and technical consultation. The Informatics Group seeks to empower and strengthen informatics efforts throughout the division via innovation, collaboration, service, and the management of shared analytics resources. Additionally, the group serves as a forum for informatics knowledge exchange, helping to align division-wide computational efforts.

Under the guidance of a mentor, the participant will have opportunities to engage in a variety of data enrichment projects using techniques such as anomaly detection and/or feature selection. Statistical and evolutionary research projects are also available, such as augmenting systems for evolutionary group annotation, passage-mutation model refinement, and the high-throughput inference of virus reassortants. The participant will be trained to use distributed database techniques, such as Apache Hive and Apache Impala, using structured query language (SQL). There will also be opportunities to learn distributed scientific computation in the context of Apache Spark or Univa Grid Engine. The participant will gain experience using Git and GitLab and will receive training to enhance programming skills. Finally, the participant will learn about influenza, its molecular classifications and antigenic characterization, as well as the data ecosystem necessary for a world-class influenza surveillance system.

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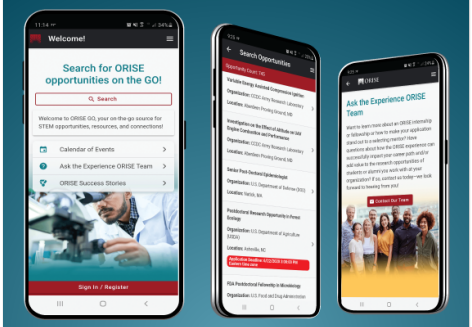

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Anticipated Appointment Start Date: January 6, 2020

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 can be full-time or part-time, depending on the candidate's availability, 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 degree in one of the relevant fields. Degree must have been received within five years of the appointment start date. Candidates who have received their degree are preferred.

Preferred skills:

- Skill in at least one programming or scripting language (C/C++, Java, Perl, Python, R, Scala)
- Working knowledge of Linux command line (BASH, etc.) operations
- Training or experience in using Structured Query Language (SQL)
- Experience in one of the following will be strongly preferred: (a) probability estimation, (b) machine learning, (c) inferential statistics, or (d) Bayesian Graphical Models

Eligibility Requirements

- **Degree:** Master's Degree received within the last 60 months or currently pursuing.
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (4 👁)
  - **Engineering** (2 👁)
  - **Life Health and Medical Sciences** (3 👁)
  - **Mathematics and Statistics** (2 👁)