Opportunity Title: Data Science and Visual Analytics Fellowship - FDA OPHSA
Opportunity Reference Code: FDA-OPHSA-2019-0001

Organization	U.S. Food and Drug Administration (FDA)
Reference Code	FDA-OPHSA-2019-0001
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
- Two educational or professional references

All documents must be in English or include an official English translation.

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

Description

An opportunity is available at the U.S. Food and Drug Administration (FDA), Office of Public Health Strategy and Analysis (OPHSA) in Silver Spring, Maryland.

FDA is responsible for protecting and promoting public health through regulation of a wide range of products including medical products, food and tobacco. OPHSA is located in the Office of Policy, Planning, Legislation, and Analysis, in the Office of the Commissioner. OPHSA serves as a resource to the Agency for quantitative and qualitative research and analysis on emerging issues and for advancing work on priority public health initiatives. OPHSA does this through its work on initiatives such as opioids, drug pricing, and transparency, as well as by developing and executing research to link agency activities and outputs to public health outcomes.

Under the guidance of a mentor, potential training projects for OPHSA ORISE fellows include:

1) Developing visual analytical dashboards in Python, Qlik Sense, or Tableau; 2) data analysis of complex, large relational datasets in Python or other analytical tools. As part of these projects, the candidate will be required to script ad-hoc and novel solutions in Python, for example, management of PostgreSQL databases and interacting with web services for data calls.

In addition and under the guidance of a mentor, Fellows will have the opportunity to participate in the following:

1. Analytical visualizations of data from National Poison Control Centers

   FDA uses consolidated data from all poison control centers in the US to better understand the potential harm experienced by millions of Americans following exposure to drugs, dietary supplements, or other substances regulated by the Agency. The fellow will have opportunities to increase their understanding of the process to undertake improvement of an existing visual analytical platform, with real-time data updates, for Agency-wide use deployed on AWS cloud.

2. Analysis and visualization of FDA approved first generic drugs and their impact on competition and pricing

   Fellows will assist established FDA personnel in data analysis (and visual analytics) for a multi-phase study that seeks to determine the characteristics and marketing status of all first generics approved by FDA since 2010, as well as their impact on generic drug competition and pricing.

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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 FDA. The initial appointment is for one year, but may be renewed upon recommendation of FDA 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 FDA in the Silver Spring, Maryland, area. Participants do not become employees of FDA, DOE or the program administrator, and there are no employment-related benefits.

The Homeland Security Presidential Directive-12 (HSPD-12) mandates a background check be completed for both U.S. Citizens and foreign nationals. Foreign nationals must have resided in the U.S. for at least three (3) of the past five (5) years in order for FDA to be able to complete a background check.

Anticipated Appointment Start Date: January 2019

Qualifications

The qualified candidate must have received a bachelor's, master's or doctoral degree in computer science, data science, or related fields. Degree must have been received within five years of the appointment start date.

Preferred skills:

- Strong foundational knowledge and experience in Python including: data science packages (e.g., pandas and numpy); managing PostgreSQL databases (e.g., psycopg); ability to create data/analytical visualization in Flask and Dash/Plotly; and ability to set up and call APIs/webservices (SOAP and REST) in Python (e.g., zepe) and other methods
- Experience working with SQL in large relational datasets (e.g., PostgreSQL)
- Familiarity with data visualization tools such as Qlik Sense and Tableau
- Experience conducting quantitative research (primary data collection, secondary analysis, mathematical modeling, etc.) and work in the public health sector
- Clinical or scientific background, such as RN, PA, MD, PharmD, or PhD
- Demonstrated ability to work independently and collaboratively

Eligibility Requirements

- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 month(s).
- **Discipline(s):**
  - **Computer, Information, and Data Sciences** (16 👁)
  - **Mathematics and Statistics** (1 👁)