

Opportunity Title: FDA Machine Learning Automatic Language Translation Fellowship

Opportunity Reference Code: FDA-CDER-2021-0649

Organization U.S. Food and Drug Administration (FDA)

Reference Code FDA-CDER-2021-0649

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

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

If you have questions, send an email to ORISE.FDA.CDER@oraui.org. Please include the reference code for this opportunity in your email.

Application Deadline 9/30/2021 2:30:08 AM Eastern Time Zone

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

A research opportunity is available in the Office of Pharmaceutical Quality/Office of Surveillance, Center for Drug Evaluation and Research (CDER), Food and Drug Administration (FDA) in Silver Spring, Maryland.

The Office of Surveillance deals with a high volume of structured and unstructured data related to regulated facilities and products and has limited resources to perform manual reviews. There is a need to apply modern statistical approaches, such as data mining, machine learning and predictive analytics to analyze bigger, more complex data and deliver faster, more accurate results. The objective of this project is to research these available methods, test their application, and compare results to identify the most robust approaches.

Under the guidance of a mentor, the participant will learn to evaluate and enhance an automated (i.e., machine) language translation program, identify techniques used by other industries (e.g., automotive, retail) to monitor product performance and customer sentiment, and test the identified methods using pharmaceutical quality data. This experience will enhance their overall training and development in computer science, bioinformatics, and as a scientist.

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 six months, 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 can be either full-time (preferred) or part-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.

Completion of a successful background investigation by the Office of Personnel Management is required for an applicant to be on-boarded at FDA. OPM can complete a background investigation



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only for individuals, including non-US Citizens, who have resided in the US for a total of three of the past five years.

FDA requires ORISE participants to read and sign their FDA Education and Training Agreement within 30 days of his/her start date, setting forth the conditions and expectations for his/her educational appointment at the agency. This agreement covers such topics as the following:

- Non-employee nature of the ORISE appointment;
- Prohibition on ORISE Fellows performing inherently governmental functions;
- Obligation of ORISE Fellows to convey all necessary rights to the FDA regarding intellectual property conceived or first reduced to practice during their fellowship;
- The fact that research materials and laboratory notebooks are the property of the FDA;
- ORISE fellow's obligation to protect and not to further disclose or use non-public information.

Qualifications The qualified candidate should be currently pursuing or have received a bachelor's, 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:

- Knowledge in machine translation system, artificial intelligence (AI), or machine learning (ML)
- Knowledge in multiples languages, especially Spanish, French, Italian, Chinese, and German
- Knowledge in medical, chemical and pharmaceutical terms

- Eligibility Requirements**
- **Degree:** Bachelor's Degree, Master's Degree, or Doctoral Degree received within the last 60 months or currently pursuing.
 - **Discipline(s):**
 - **Computer, Information, and Data Sciences** ([16](#) 👁)
 - **Life Health and Medical Sciences** ([1](#) 👁)