

Staff Fellow - Artificial Intelligence/Medical Imaging Device Scientist

INTRODUCTION: The U.S. Food and Drug Administration ([FDA or Agency](#)) is the regulatory, scientific, public health and consumer protection agency responsible for ensuring all human and animal drugs, medical devices, cosmetics, foods, food additives, drugs and medicated feeds for food producing animals, tobacco and radiation emitting devices safe, and effective. The mission of the Center for Devices and Radiological Health ([CDRH or Center](#)) is to protect and promote the public health by performing essential public health tasks by making sure that medical devices and radiological health products are safe for people in the United States. The Office of Science and Engineering Laboratories ([OSEL](#)) is dedicated to promoting innovation for the development of new lifesaving medical devices. OSEL is composed of scientists and engineers who conduct regulatory science research and have a broad diversity of expertise from microbiology to artificial intelligence and machine learning. The Division of Imaging, Diagnostics, and Software Reliability ([DIDSR](#)) within CDRH's OSEL develops methods for evaluating the image quality of emerging imaging systems, develops methods for characterizing new medical image display devices, evaluates the dose reduction potential of new image reconstruction methods and assesses the performance of Artificial Intelligence (AI) and Machine Learning (ML) algorithms.

POSITION SUMMARY: DIDSR is now accepting applications for several Staff Fellow positions from candidates with experience and expertise in artificial intelligence and medical imaging. As an integral member of DIDSR, you will assist the Division in leading and advancing regulatory science in the development and assessment of AI and ML methods and techniques for medical devices. Fellows also participate in the regulatory review of medical devices based on emerging technologies for diagnostic and medical imaging products. Research areas of immediate interest include:

- Evaluation of federated data methods and federated machine-learning approaches
- Image quality assessment of AI image reconstruction approaches for sparse data techniques
- Statistical methods for performance analysis of medical AI including generative AI
- Statistical approaches for evaluating digital twin constructs and for the characterization of knowledge-based and data-driven synthetic datasets and models

These efforts of the Staff Fellows will contribute to the advancement of regulatory science regarding emerging AI/ML techniques in medical devices and prepare the Agency for the regulatory evaluation of related products. Candidates with strong backgrounds in theoretical and statistical aspects of ML, deep learning and algorithm assessment are preferred for senior level positions. Candidates with strong programming skills and experience in AI/ML will be considered for entry level positions.

EDUCATIONAL REQUIREMENTS: Applicants must possess a Ph.D. in Engineering, Physics, Optics, Mathematics, Statistics, Computer Science, or related fields, with an eagerness to solve technical challenges systematically with experimental and/or computational approaches. Applicants with a proven record of research and development beyond the doctoral program in similar fields will be considered for senior status and increased salary.

FOREIGN EDUCATION: Applicants who have completed part or all of their education outside the United States must, in order to meet qualification requirements, have their foreign education evaluated by an accredited organization to ensure the foreign education is comparable to education received in the United States. It is the responsibility of the candidate or employee to provide written proof of her/his foreign education accreditation prior to appointment or placement in a different occupational series from which

placed. For further information, visit the [U.S. Department of Education - Foreign Education Evaluation](#).

BASIC QUALIFICATIONS: Applicants must meet the specific qualification requirements of the following applicable occupational series: [General Engineering \(0801\)](#), [Materials Engineering \(0806\)](#), [Mechanical Engineering \(0830\)](#), [Electrical Engineering \(0850\)](#), [Electronics Engineering \(0855\)](#), [Bioengineering and Biomedical Engineering \(0858\)](#), [Computer Engineering \(0854\)](#), [Computer Science \(1550\)](#), [Physics \(1310\)](#), [Mathematics \(1520\)](#), [Mathematical Statistics \(1529\)](#), [Statistics \(1530\)](#)

ADDITIONAL QUALIFICATIONS: To qualify as a Staff Fellow, you must: be a US Citizen, Permanent Resident, or Non-Citizen with residency status in the U.S., three (3) out of the last five (5) years; possess a doctoral-level degree from an accredited institution of higher learning, including: Ph.D., M.D., D.V.M., D.D.S., D.M.D., Sc.D., or other research doctoral-degree widely recognized in U.S. academe as equivalent to a Ph.D.. *(In limited instances non-doctoral candidates, and/or candidates with less experience may be acceptable).*

PROFESSIONAL EXPERIENCE: Candidates must have the relevant knowledge, skills, and abilities:

- Demonstrated track record of scientific independence and collaborative research work.
- Ability to contribute to multi-disciplinary team to resolve challenging research questions.

CONDITIONS OF EMPLOYMENT:

- One-year probationary period may be required.
- This position is for a **three-year** appointment and will be filled through [FDA's Staff Fellowship Program](#)
- Background and/or Security investigation required.
- Applicants who are U.S. Citizens and born male, on (or after) 12/31/1959, must be registered with the [Selective Service System](#) OR have an approved exemption.
- This position may require financial disclosure reporting and will be subject to FDA's prohibited financial interest regulation. If you are hired, you may be required to divest of certain financial interests. You are advised to seek additional information on this requirement from the hiring official before accepting any job offers. For additional information, please visit the [FDA Ethics and Integrity Office](#).
- All candidates must meet applicable security requirements which include a background check and a minimum of three (3) out of the past five (5) years' residency status in the US. If not previously completed, a background security investigation will be required for all appointees. Appointment will be subject to the applicant's successful completion of a background security investigation and favorable adjudication. Failure to successfully meet these requirements may be grounds for appropriate personnel action. In addition, if hired, a background security reinvestigation or supplemental investigation may be required at a later time. Applicants are also advised that all information concerning qualifications is subject to investigation. False representation may be grounds for non-consideration, non-selection, or appropriate disciplinary action.

LOCATIONS: [FDA's White Oak Campus](#) in Silver Spring, Maryland

SALARY: Salary range is \$89,834.00 - \$164,102.00 and is commensurate with education and experience.

BENEFITS: A comprehensive benefits package is offered to most Federal employees. For additional benefit information click [here](#).

HOW TO APPLY: Prior to applying, please see the following instructions:

- Submit an electronic resume or curriculum vitae and a cover letter describing why you are uniquely qualified for this job.
- Include Job Reference code “**2024-DID-AI-MID**” in the subject line of the email.
- Email applicant package to CDRH-OSEL-Opportunities@fda.hhs.gov.
- Applications and all supporting documentation will be accepted through **December 7, 2023**.
- For more information about Office of Science and Engineering Laboratories (OSEL) at FDA/CDRH: <https://www.fda.gov/about-fda/cdrh-offices/office-science-and-engineering-laboratories>.
- Visit [CDRH Jobs](#)
- Contact Denise Townsend for questions: Denise.Townsend@fda.hhs.gov

The United States Government [equal opportunity employer](#) and does not discriminate on the basis of race, color, religion, sex (including pregnancy and gender identity), national origin, political affiliation, sexual orientation, marital status, disability, genetic information, age, membership in an employee organization, retaliation, parental status, military service or other non-merit factor.