



UNITED STATES DEPARTMENT OF COMMERCE  
Economics and Statistics Administration  
U.S. Census Bureau  
Washington, DC 20233-0001

## Computer Science - Data Science Staff Development & Industry Exchange Program

*Work with leading academics and make an impact on our national statistics.*

The Census Bureau is launching a Computer Science - Data Science Staff Development and Industry Exchange Program (CSDS) in order to provide opportunities to share best practices with Computer Scientists and Data Scientists from the private sector and build the pool of available US Citizen applicants for federal positions requiring these skill sets.

Participants will be selected after interviews from a resume pool gathered by the Census Bureau's Human Resources Division. Applicants must be **US Citizens** and will need to pass a background investigation before employment.

### To Apply:

- **Send a cover letter identifying the positions you are interested in, a detailed resume, and unofficial versions of academic transcripts covering relevant coursework** to [hrd.schedule.a.r.fellows.hiring@census.gov](mailto:hrd.schedule.a.r.fellows.hiring@census.gov) with "CSDS" and **the name of the position** in subject line of the email. Please make sure to remove Social Security Number and Date of Birth from all documents. Please state citizenship on resume.
- We expect to contact applicants to schedule interviews the week of July 8, 2018.

### Initial Positions in the Center for Disclosure Avoidance Research (CDAR)

1. **Senior Data Modeler:** This grade 14 position will develop algorithms for deploying differential disclosure approaches across data products for the 2020 Census. Applicants are expected to have experience in all stages of statistical model development efforts, including requirements analysis, design, testing, and implementation. Applicant should have experience in creating realistic synthetic data from a model and validating the data. The individual must have at least a working knowledge of the concepts of disclosure avoidance, especially in the area of noise infusion. Expertise in programming using SQL within the context of relational databases, such as Oracle or MySQL, as well as producing scripted graphs using tools such as R or Python, is required.
2. **Statistician:** This grade 11-13 position will support the *Senior Data Modeler* in developing algorithms for deploying differential disclosure approaches for data products. This grade 11-13 position will work to extend the development of the disclosure avoidance system for the 2020 Census. The successful applicant's specific duties will include developing algorithms, developing models that represent statistics of interest (households and persons) for the 2020 Census, and transforming those statistics as models that can be expressed in Python. The individual will also participate in the development of a statistical processing system that can be built on top of Python, NumPy, Apache Spark, and the Gurobi optimizer. The individual will also create new optimization tasks using Gurobi, as well as create and implement novel measures of error and accuracy. **Fluency in Python3 required.**

3. **Computer Scientist/ Software Engineer:** Successful applicants for this grade 13 position will have a Bachelor's in Computer Science or BS/MS/PhD in science, mathematics, or engineering as well as professional experience as a computational software engineer. Resumes should demonstrate experience in developing production code that manipulates large data sets and functions within a data management production system; proficiency in statistical programming in Python; knowledge of Unix command line, and scheduling jobs using tools such as PBSPro or Apache Spark; strong interpersonal and communication skills; and use of professional software engineering practices, including source code management and unit testing.
4. **Technology Management:** Successful applicants to this grade 14 position will have experience and skills in management of a project to include coordination of contractor resources and development of monthly status reports. The successful applicant's resume should demonstrate experience in project management and/or task order management; experience with projects related to data modeling and software engineering, working knowledge of project management practices defined by PMI; excellent written and oral communication skills, and ability to lead teams in the development of complex applications. PMP Certificate is desired but not required.
5. **Data Scientist:** This grade 13 position will be responsible for data management for the 2020 Census. In specific, the successful applicant will be responsible for creating and running ETL (extract, translate and load) operations, data format conversion, creating and implementing of simple statistical models, data curation, running large-scale simulations with software developed by the 2020 Census team and managing the data produced by the results of those simulations, and producing summary reports. **Fluency in Python3 is required.**
6. **IT Specialists:** These grade 13 positions will assure the successful development, testing, and analysis of the 2020 Census disclosure avoidance system. Successful applicants will provide computing support, DevOps engineering, software quality assurance, software integration and curation, analysis of performance, debugging of network permissions and connectivity issues, configuration management, customer engineering and development of technical documentation. **Fluency in Python3 and Unix command line are required.** Resumes should demonstrate experience with Linux/SAS administration, configuration of network communication services, SAS/Share, UNIX/Linux scripting, file transfer protocols and data synchronization (e.g., FTP/SFTP and rsynch), migration of data processing operations across various server platforms, and system services such as Apache and Tornado.
7. **Trainer:** This career ladder, grade 9-12 position will manage and deliver training on new disclosure limitation procedures to the Disclosure Avoidance Officers throughout the agency.

More positions will become available periodically. Applicants with strong resumes and interest in working for the Census Bureau should submit application packages (cover letters, resumes, and transcripts) describing their skills in model fitting, data science, data analytics, machine learning, high performance computing, and management of large data sets.