

1550 – Computer Scientist (Data Scientist)

Major Duties for This Position May Include:

- Conducts advanced data analysis and designs highly complex algorithms using artificial intelligence (e.g., machine learning) methods.
- Produces static and interactive data visualizations to communicate findings to internal and external audiences.
- The incumbent supports CDC's Data Modernization Initiative by performing data science work that requires extraction of knowledge from various surveillance systems and programs that are structured or unstructured
- Coordinates the efforts of other professionals, technical specialists within the agency, other government agencies and industry pursuing various research and development projects involved in the public healthcare-related field.

Related Competencies

- Data Analysis and Interpretation
- Data and Information Management
- Information Security
- Data Collection, Analysis, and Management
- Public Health Knowledge

Basic Requirements

Bachelor's degree in computer science **or** bachelor's degree with 30 semester hours in a combination of mathematics, statistics, and computer science. At least 15 of the 30 semester hours must have included any combination of statistics and mathematics that included differential and integral calculus. All academic degrees and course work must be from accredited or pre-accredited institutions.

Minimum Qualifications

In additions to meeting the basic requirements above, applicants must meet the minimum qualifications requirement as defined below:

GS-07 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-05 grade level in the Federal Service. Specialized experience for this position includes:

- Performing data science work requiring the application of data mining techniques, statistical analysis, quantitative and qualitative research, and analytics.

Or Education

One full year of graduate level education.

Or Superior Academic Achievement

Based on a bachelor's degree that is demonstrated through class standing (upper 1/3 of class); grade point average (3.0/4.0 overall or 3.5/4.0 in major), or election to membership in a qualifying national scholastic honor society.

Or Combination

You may qualify on a combination of education and experience, the total percentage of experience at the required grade level compared to the specialized experience requirement, as well as the percentage of completed education compared to the educational requirement must equal at least 100 percent.

GS-09 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-07 grade level in the Federal Service. Specialized experience for this position includes:

- Assist in the development of experimental design approaches to validate finding or test hypotheses
- Partnering with researchers and subject matter experts in continuous improvement processes impacting data quality

Or Education

Master's or equivalent graduate degree **or** two (2) full years of progressively higher-level graduate education leading to such a degree. **TRANSCRIPTS REQUIRED.**

Or Combination

You may qualify on a combination of education and experience. The total percentage of experience at the required grade level compared to the requirement, must equal at least 100 percent. Only graduate level education more than the first 18 semester hours (27 quarter hours) may be combined to be considered for qualifying education. **TRANSCRIPTS REQUIRED.**

GS-11 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-09 grade level in the Federal Service. Specialized experience for this position includes:

- Designs experiments, tests hypotheses, and builds scalable data science models
- Conducts advanced data analysis and designs highly complex algorithms using artificial intelligence (e.g., machine learning) methods

Or Education

Ph.D. or equivalent doctoral degree **or** three (3) full years of progressively higher-level graduate education leading to such a degree. **TRANSCRIPTS REQUIRED.**

Or Combination

You may qualify on a combination of education and experience. The total percentage of experience at the required grade level compared to the requirement, must equal at least 100 percent. Only graduate level education more than the first 36 semester hours (54 quarter hours) may be combined to be considered for qualifying education. **TRANSCRIPTS REQUIRED.**

GS-12 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-11 grade level in the Federal Service. Specialized experience for this position includes:

- Developing software systems, high-speed computing systems
- Real time data acquisitions systems, simulation modeling and data analysis for public health informatics

Note: There is no substitution of education for specialized experience at the GS-12 level.

GS-13 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-12 grade level in the Federal Service. Specialized experience for this position includes:

- Analyzing and validating software applications to solve complex computer requirements related to public health informatics.

Note: There is no substitution of education for specialized experience at the GS-13 level.

GS-14 Specialized Experience Requirements For

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-13 grade level in the Federal Service. Specialized experience for this position includes:

- Developing and presenting information and reports, project partners, peers, and other parties regarding technical results from public health data.

Note: There is no substitution of education for specialized experience at the GS-14 level.

GS-15 Specialized Experience Requirements

You must have one year of specialized experience at a level of difficulty and responsibility equivalent to the GS-14 grade level in the Federal Service. Specialized experience for this position includes:

- Implementing cloud services from authorized providers - including the ability to architect, deploy, configure, integration, secure, authorize, and operationalize various infrastructure-as-a service (IaaS), platform-as-a-service (PaaS), software-as-a-service (SaaS), and other as-a-service capabilities.

Note: There is no substitution of education for specialized experience at the GS-15 level.