



UNITED STATES OFFICE OF PERSONNEL MANAGEMENT
Washington, DC 20415

The Director

April 29, 2024

Memorandum For Heads of Executive Departments and Agencies

From: Kiran A. Ahuja
Director

Subject: **Skills-Based Hiring Guidance and Competency Model for Artificial Intelligence Work**

In support of [Executive Order 14110 on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence](#) and [Public Law 116-260, The AI in Government Act of 2020 \(the Act\)](#), OPM is pleased to issue skills-based hiring guidance and a competency model for Artificial Intelligence (AI), data, and technology talent to assist agencies to identify key skills and competencies needed for AI professionals and increase access to these technical roles for individuals with nontraditional academic backgrounds.

OPM Memorandum, [The AI in Government Act of 2020 – Artificial Intelligence Competencies](#), issued on July 6, 2023, defined general and technical competencies to support agencies' efforts to target AI skills needed to fill positions to expand AI capabilities government-wide. Since its issuance, OPM consulted with subject matter experts (SMEs) from Federal agencies and conducted environmental scans, focus groups, and Government-wide surveys. OPM used the qualitative and quantitative data collected to paint a comprehensive picture of AI work throughout the Federal government and to validate the attached AI competency model, which includes:

- AI competencies,
- AI general and technical competencies for each applicable grade level,
- AI general and technical competency definitions, and
- guidance on using the AI Competency Model to implement skills-based hiring.

The model empowers agencies to shift towards a skills-centric paradigm that emphasizes practical skills over educational pedigrees or past titles and prioritizes talent with AI proficiencies tailored to organizational objectives. For new or rapidly evolving fields, such as those associated with AI, data, and technology, it is crucial that agencies adopt this skills-based hiring approach. This ensures the Federal workforce can readily adapt to the changing landscape and integrate innovative skills that may not yet be captured in traditional education or certification frameworks. Agencies may use this model in recruitment, assessment, hiring, workforce planning, training and development, and performance management for AI positions.

OPM's analysis also determined that AI work is multidisciplinary and found in different occupational series. AI work involves skills designing and developing systems capable of performing tasks that includes the use of machine learning and natural language processing to create, deliver, and maintain algorithms, large language models, and systems that can process and analyze data used to make intelligent decisions or predictions. AI work impacts multiple occupations government-wide. OPM has released the [Artificial Intelligence Classification Policy and Talent Acquisition Guidance](#) to provide clear and concise instructions on how to identify AI work that ensures consistency and accuracy in determining the appropriate classification.

Additionally, OPM has developed a comprehensive plan for training human resources specialists, hiring managers, and industrial organizational psychologists that will ensure that the new system is understood and effectively implemented. Success will be measured by increases in job postings using competency-based assessments, hiring manager satisfaction, and selection rates, alongside a decrease in postings relying on education or other proxies.

We appreciate your assistance with developing policy in line with the requirements of the AI Executive Order and the Act. AI has impacted how work is performed and will continue to evolve at a rapid pace. OPM is committed to supporting and empowering Federal agencies and Federal employees with the necessary skills to meet your missions and strategic human capital goals. If you have questions about the competency model, please contact Classification and Assessment Policy at competency@opm.gov.

Attachment: AI Competency Model

cc: Chief Human Capital Officers (CHCOs), Deputy CHCOs, Human Resources Directors, Chief Artificial Intelligence Officers (CAIOs), Chief Information Officers (CIOs), and Chief Data Officers (CDOs)

Artificial Intelligence (AI) Competency Model



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Artificial Intelligence Competencies

The table below presents the 43 general competencies and 14 technical competencies found to be important for performing AI work. Through job analysis (5 CFR § 300.103), agencies must determine the applicability of these competencies to positions within their agency. Please refer to OPM's [Delegated Examining Operations Handbook](#) for more information on conducting a job analysis.

General Competencies

- Accountability
- Attention to Detail
- Computer Skills
- Conflict Management
- Contracting or Procurement
- Creativity and Innovation
- Customer Service
- Decisiveness
- Design
- Digital Collaboration
- Emotional Intelligence
- External Awareness
- Flexibility
- Influencing or Negotiating
- Information Management
- Integrity or Honesty
- Interpersonal Skills
- Learning
- Mathematical Reasoning
- Memory
- Mental Visualization
- Oral Communication
- Organizational Awareness
- Partnering
- Perceptual Speed
- Planning and Evaluating
- Political Savvy
- Problem Solving
- Project Management
- Reading
- Reading Comprehension
- Reasoning
- Resilience
- Self-Management
- Strategic Thinking
- Stress Tolerance
- Supporting Diversity
- Teaching Others
- Teamwork
- Technical Competence
- Technology Application
- Technology Awareness
- Written Communication

Technical Competencies

- Application Development
- Artificial Intelligence and Machine Learning
- Communicating Results
- Data Analysis
- Data Extraction and Transformation
- Data Visualization
- Mathematics and Statistics
- Modeling and Simulation
- Monitoring
- Sociotechnical Systems
- Software Engineering
- Systems Design
- Testing and Validation
- Values-Driven Design

Artificial Intelligence Competencies by Grade

The following tables list the 40 general competencies that have been confirmed as appropriate for employee selection on a government-wide basis for AI work at the grades indicated. Note: Cells designated with NR stands for Not Rated.

General Competencies

Competency	GS-11	GS-12	GS-13	GS-14	GS-15
Accountability	NR	X	X	X	X
Attention to Detail	X	X	X	X	X
Computer Skills	X	X	X	X	X
Conflict Management	NR	NR	X	NR	X
Creativity and Innovation	NR	NR	X	X	X
Customer Service	NR	NR	X	X	X
Decisiveness	NR	NR	NR	X	X
Design	X	NR	X	NR	X
Digital Collaboration	NR	NR	NR	NR	X
Emotional Intelligence	NR	NR	NR	NR	X
External Awareness	NR	NR	NR	NR	X
Flexibility	X	NR	X	X	X
Influencing or Negotiating	NR	NR	NR	NR	X
Information Management	NR	NR	X	X	X
Integrity or Honesty	X	X	X	X	X
Interpersonal Skills	X	X	X	X	X
Learning	X	X	X	X	X
Mathematical Reasoning	X	X	X	NR	NR
Memory	X	NR	NR	NR	X
Oral Communication	X	X	X	X	X
Organizational Awareness	NR	NR	NR	NR	X
Partnering	NR	NR	NR	X	X
Planning and Evaluating	NR	NR	X	X	X
Political Savvy	NR	NR	NR	NR	X
Problem Solving	X	X	X	X	X
Project Management	NR	NR	NR	X	X
Reading	X	X	X	X	X

Competency	GS-11	GS-12	GS-13	GS-14	GS-15
Reading Comprehension	X	X	X	X	X
Reasoning	X	X	X	X	X
Resilience	X	NR	NR	X	X
Self-Management	NR	X	X	X	X
Strategic Thinking	NR	NR	X	X	X
Stress Tolerance	NR	NR	NR	NR	X
Supporting Diversity	NR	NR	X	NR	X
Teaching Others	NR	NR	NR	NR	X
Teamwork	X	X	X	X	X
Technical Competence	X	X	X	X	X
Technology Application	X	X	X	X	X
Technology Awareness	NR	NR	X	X	X
Written Communication	X	X	X	X	X

The following tables list the 7 technical competencies that have been confirmed as appropriate for employee selection on a government-wide basis for AI work at the grades indicated. Note: Cells designated with NR stands for Not Rated.

Technical Competencies

Competency	GS-13	GS-14	GS-15
Artificial Intelligence and Machine Learning	NR	NR	X
Communication Results	NR	X	X
Data Analysis	X	X	X
Data Extraction and Transformation	NR	X	X
Data Visualization	NR	NR	X
Testing and Validation	NR	NR	X
Values-driven Design	NR	NR	X

Competency Ranking

As the maturity level of AI skills continues to evolve and becomes more prevalent, certain general and technical competencies may shift in importance within the next three years. Ongoing advancements and innovations in AI, technology and data will continue to shape AI skills and work. The lists below present the rank order of the general and technical competencies for AI work on current importance and future importance in three years based on supervisor and employee ratings. Note: Cells designated with NR stands for Not Ranked.

Competency	Current Importance	Future Importance
Integrity or Honesty	1	1
Technical Competence	2	2
Accountability	3	12
Problem Solving	4	3
Reasoning	5	5
Computer Skills	6	4
Reading Comprehension	7	9
Reading	8	14
Technology Application	9	6
Attention to Detail	10	7
Learning	11	8
Written Communication	12	11
Interpersonal Skills	13	18
Teamwork	14	17
Self-Management	15	25
Oral Communication	16	20
Communication Results	NR	10
Technology Awareness	NR	13
Data Analysis	NR	15
Flexibility	NR	16
Information Management	NR	19
Data Extraction and Transformation	NR	21
Planning and Evaluating	NR	22
Creativity and Innovation	NR	23
Data Visualization	NR	24

Competency	Current Importance	Future Importance
Customer Service	NR	26
Decisiveness	NR	27
Mathematical Reasoning	NR	28
Strategic Thinking	NR	29

Artificial Intelligence Competency Model Definitions

This section presents definitions for the general and technical competencies found within the AI Competency Model

Definitions of General Competencies

Competency	Definition
Accountability	Holds self and others accountable for measurable high-quality, timely, equitable and cost-effective results. Determines objectives, sets priorities, and does and delegates' work. Accepts responsibility for mistakes. Complies with established control systems and rules.
Attention to Detail	Is thorough when performing work and conscientious about attending to detail and potential biases.
Computer Skills	Uses computers, software applications, databases, and automated systems to accomplish work.
Conflict Management	Encourages creative tension and differences of opinions. Anticipates and takes steps to prevent counter-productive confrontations. Manages and resolves conflicts and disagreements in a constructive manner. Escalates conflicts and disagreements when appropriate and constructive in order to get to resolution.
Creativity and Innovation	Develops new insights into situations; questions conventional approaches; encourages new ideas and innovations; designs and implements new or cutting-edge programs or processes.
Customer Service	Anticipates and meets the needs of both internal and external customers. Seeks to obtain customer feedback through various channels to improve products and services. Delivers high-quality products and services; is committed to continuous improvement.

Competency	Definition
Decisiveness	Makes well-informed, effective, and timely decisions, balancing speed, and thoughtfulness; perceives the impact and implications of decisions and takes decisive and early steps to mitigate negative impacts.
Design	Knowledge of conceptualizing, developing, producing, understanding, and using plans, models, blueprints, and maps, including the use of tools and instruments to produce precision technical drawings, working prototypes, components, or systems.
Digital Collaboration	Uses digital tools, technologies, or social media for communication, knowledge-sharing, and collaborative processes; works with others to construct and create resources and knowledge, or provide services, in a digital environment.
Emotional Intelligence	Ability to understand and manage feelings so that they are expressed appropriately and can monitor one's own and others' feelings and emotions, discriminate among the emotions and to use this information to manage situations, thinking and actions.
External Awareness	Understands and keeps up to date on local, national, and international policies and trends that affect the organization and shape stakeholders' views; is aware of the organization's impact on the external environment.
Flexibility	Is open to change and new information; rapidly adapts to new information, changing conditions, or unexpected obstacles.
Influencing or Negotiating	Persuades others; builds consensus through give and take; gains cooperation from others to obtain information and accomplish goals.

Competency	Definition
Information Management	Identifies a need for and knows where or how to gather information; organizes and maintains information or information management systems.
Integrity or Honesty	Behaves in an honest, fair, and ethical manner. Shows consistency in words and actions. Models' high standards of ethics.
Interpersonal Skills	Treats others with courtesy, sensitivity, and respect. Considers and responds appropriately to the needs and feelings of different people in different situations.
Learning	Uses efficient learning techniques to acquire and apply new knowledge and skills; uses training, feedback, or other opportunities for self-learning and development.
Mathematical Reasoning	Solves practical problems by choosing appropriately from a variety of mathematical and statistical techniques.
Memory	Recalls information that has been presented previously.
Oral Communication	Makes clear and convincing oral presentations. Listens effectively; clarifies information as needed. Effectively communicates technical information to non-technical audiences and stakeholders.
Organizational Awareness	Knows the organization's mission and functions, and how its social, political, and technological systems work and operates effectively within them; this includes the programs, policies, procedures, rules, and regulations of the organization.
Partnering	Develops networks and builds alliances; collaborates across boundaries to build strategic relationships and achieve common goals.

Competency	Definition
Planning and Evaluating	Organizes work, sets priorities, and determines resource requirements; determines short- or long-term goals and strategies to achieve them; coordinates with other organizations or parts of the organization to accomplish goals; monitors progress and evaluates outcomes. Sets reasonable expectations with leadership and stakeholders on project delivery.
Political Savvy	Identifies the internal and external politics that impact the work of the organization. Perceives organizational and political reality and acts accordingly.
Problem Solving	Identifies and analyzes problems; weighs relevance and accuracy of information; generates and evaluates alternative solutions; makes recommendations.
Project Management	Knowledge of the principles, methods, or tools for developing, scheduling, coordinating, and managing projects and resources, including monitoring, and inspecting costs, work, and contractor performance.
Reading	Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.
Reading Comprehension	Understands and interprets written material, including technical material, rules, regulations, instructions, reports, charts, graphs, or tables; applies what is learned from written material to specific situations.
Reasoning	Identifies rules, principles, or relationships that explain facts, data, or other information; analyzes information and makes correct inferences or draws accurate conclusions.
Resilience	Deals effectively with pressure; remains optimistic and persistent, even under adversity. Recovers quickly from setbacks.

Competency	Definition
Self-Management	Sets well-defined and realistic personal goals; displays a high level of initiative, effort, and commitment towards completing assignments in a timely manner; works with minimal supervision; is motivated to achieve; demonstrates responsible behavior.
Strategic Thinking	Formulates objectives and priorities and implements plans consistent with the long-term interests of the organization in a global environment. Capitalizes on opportunities and mitigates risks.
Stress Tolerance	Deals calmly and effectively with high stress situations (for example, tight deadlines, hostile individuals, emergency situations, dangerous situations).
Supporting Diversity	Maintains an open mind regarding different ideas, opinions, values, and beliefs; recognizes own worldview and understands its influence on interactions with others; incorporates a variety of viewpoints to help accomplish work goals; contributes to an inclusive work environment with equitable treatment of individuals across all demographics (for example, race, gender) and social (for example, culture) groups.
Teaching Others	Helps others learn through formal or informal methods; identifies training needs; provides constructive feedback; coaches others on how to perform tasks; acts as a mentor.
Teamwork	Encourages and facilitates cooperation, pride, trust, and group identity; fosters commitment and team spirit; works with others to achieve goals.
Technical Competence	Uses knowledge that is acquired through formal training or extensive on-the-job experience to perform one's job; works with, understands, and evaluates technical information related to the job; advises others on technical issues.

Competency	Definition
Technology Application	Uses machines, tools, instruments, or equipment effectively; uses computers and computer applications to analyze and communicate information in the appropriate format.
Technology Awareness	Knowledge of developments and new applications of information technology (hardware, software, telecommunications), emerging technologies and their applications to business processes, how emerging technologies can impact people’s rights and safety, and applications and implementation of information systems to meet organizational requirements.
Written Communication	Writes in a clear, concise, organized, and convincing manner for the intended audience. Effectively communicates technical information to non-technical audiences and stakeholders.

Definitions of Technical Competencies

Competency	Definition
Artificial Intelligence and Machine Learning	Knowledge of the principles, methods, and tools used to design systems that perform and apply human-like intelligence functions such as neural networks, deep learning, natural language processing, robotics, and image recognition.
Communication Results	Translates technical concepts, data findings, uncertainty, or limitations (including potential bias) from data sets into concise, plain language and supporting diagrams and media.
Data Analysis	Manipulates and exploits internal and external, structured, and unstructured data sources to accomplish organizational goals.
Data Extraction and Transformation	Retrieves and ingests disparate types of data from a variety of unstructured and structured sources, and then organizes, cleans, and transforms data sets for easy access, analysis, and optimization.
Data Visualization	Utilizes tools, techniques, and software to generate reports or visualizations that convey data analyses, findings, and limitations.
Testing and Validation	Works closely with AI system design, engineering, implementation, and system stakeholders to develop appropriate methods for testing and validation to ensure that systems comport with goals and values, and potential sources of bias are uncovered, considered, and mitigated.

Competency	Definition
Values-driven Design	<p>Systematically applies principles and techniques from relevant subject matter domains to all aspects of design, development, maintenance, and deployment to protect the rights and safety of stakeholders and the public, ensuring equity, security, privacy, autonomy, accessibility, justice, beneficence, and nonmaleficence. Creatively combines technical and policy approaches to protect and support these core values. Ensures that values inform the design, deployment, testing, and oversight of AI systems, and that important value-related design choices are communicated to end users.</p>

AI Competency Model and Talent Acquisition Addendum

The AI Competency Model provides agencies skills-based capabilities to select, assess, hire, and train AI talent. Agencies may use the AI competency model aligned with your agency needs to fill positions. Your agency can determine the applicability of these competencies to positions within your agency by conducting a job analysis for agency work aligned with your mission (5 CFR § 300.103). A job analysis identifies the job tasks, roles, and responsibilities of the incumbent performing the job, as well as the competencies required for performance, the resources used during performance, and the context (or environment) in which performance occurs. As such, a job analysis demonstrates the clear connection between job tasks and the competencies necessary to perform those tasks.

Conducting a job analysis involves collecting information from job experts. The term subject matter expert (SME) is properly applied to anyone who has direct, up-to-date experience of a job and is familiar with all its tasks. The person might currently hold the job or supervise the job. SMEs help identify the job's critical tasks, roles, and responsibilities and the competencies needed for successful performance. Critical incidents (that is, examples of particularly effective or ineffective work behaviors) are also developed in some cases to describe essential job functions.

Documentation of the job analysis process and the linkages between job tasks, competencies, and selection tool content are essential to ensure an assessment strategy meets legal and professional guidelines. Please refer to [Appendix D](#) on conducting a job analysis in [OPM's Delegated Examining Operations Handbook](#) and [Job Analysis on OPM's Assessment and Selection](#) website for more information.

The competencies included in this issuance will impact work government-wide. AI work is multidisciplinary and is not limited to one occupation or group or family. A multidisciplinary position is a position involving duties and responsibilities closely related to more than one discipline. As a result, the position could be classifiable to two or more occupational series. The nature of the work is such that people with training and experience in either two or more occupations may be considered well-qualified to do the work. (See the [Artificial Intelligence Classification Policy and Talent Acquisition Guidance](#) for additional information on multidisciplinary positions.)

AI work involves designing and developing systems capable of performing tasks that includes the use of machine learning and natural language processing to create,

deliver, and maintain algorithms, large language models, and systems that can process and analyze data used to make intelligent decisions or predictions.

AI work involves a combination of mathematics, statistics, computer science, or domain-specific knowledge, depending on the specific area of application. AI can be extended but is not limited to U.S. national security, defense, infrastructure, manufacturing, natural resources, financial services, transportation, healthcare, energy, food, and agriculture.

AI work must also entail the technical skills and competencies identified by OPM in this issuance.

Agencies may use “Artificial Intelligence or AI” as a parenthetical title for all occupational series performing AI work the majority of the time, and not as a collateral duty. (See section Parenthetical Titles in the [Artificial Intelligence Classification Policy and Talent Acquisition Guidance](#).)

In summary, the work is considered AI work when:

1. The work aligns with the AI definition above;
2. AI work is performed on a regular and continuous basis;
3. AI work is a significant and substantial part of the overall position (that is, occupying at least 25 percent of the employee's time); and
4. The higher-level AI knowledge and skills needed to perform the work would be required in hiring for the position (aligned with [general](#) and [technical](#) competencies in this issuance).

The competencies in this issuance may also be used to establish skills-based hiring approaches for hiring. These competencies may be used to develop competency-based qualification requirements. Competency-Based Qualifications includes a set of required competencies and related proficiency levels by grade. A competency-based qualification provides a flexible way for agencies to determine if applicants are qualified for a position because of the many options for assessing applicants (for example, ability tests, work samples, structured interviews). In addition, the same assessments may be used for rating purposes, enabling a more seamless assessment process for both the applicant and agency. (See the [General Schedule Qualifications Operations Manual](#) for further guidance.)

When assessing job applicants based on competencies and proficiency levels, rather than just minimum qualifications, agencies are required to use validated (that is, job-related) assessment tools. Use of validated assessment tools, such as cognitive tests and structured interviews, is critical when assessing job applicants to validate competency-based qualifications. The [Delegated Examining Operations Handbook](#) provides guidance on how agencies should conduct assessments and evaluations, ensuring fairness and transparency for all applicants.

Applicable law requires the use of effective assessments in the hiring process, and OPM promotes their use for practical reasons as well. The use of effective assessments addresses barriers to recruiting and hiring the talent needed in agencies to perform the AI work of the agency and improves the quality and diversity of hires. In addition, the use of effective assessments in the hiring process provides human resources professionals and hiring managers the tools and resources needed to support their recruiting and hiring efforts and increase hiring manager satisfaction with the quality of applicants. This requires the collaboration between HR and hiring managers to develop and design effective assessment strategies to hire the talent needed to perform the AI work of your agency. (See [OPM Assessment and Selection](#) website and the [Artificial Intelligence Classification Policy and Talent Acquisition Guidance](#) for additional information on the use of assessments in hiring and assessing AI talent.)

Agencies must consider special hiring authorities such as a Direct Hire Authority when selecting options for assessing AI talent. When filling positions under direct hire authorities, agencies must follow the specific requirements of the authority being used. Agencies must ensure selectees meet the qualification requirements of the position through meeting the requirements described in the OPM Qualification Standard for the occupation at the grade level of the position being filled. Agencies must determine whether an applicant has the level of proficiency needed to perform the work of the position being filled. This may be done through the use of a passing grade assessment. The provisions governing direct hire waive rating and ranking, so agencies should not make a further assessment of an applicant's relative ability to perform the duties of the position.

Additional information on assessments and selection can be found on [OPM's Assessment and Selection](#) website including information on personnel assessment, assessment methods, steps to designing effective assessment strategies, and the importance of effective personnel assessment. OPM provides presentations and tools

that agencies may use to develop an assessment strategy and to learn more about various assessment tools and the use of assessments to meet agency specific needs in hiring (for example, [Designing an Assessment Strategy](#)).

The [Hiring Assessment and Selection Outcome Dashboard | D2D \(gsa.gov\)](#) provides information on agency hiring and the use of assessments for meeting requirements to hire talent using assessments.

In addition to these resources, OPM launched two free online courses as part of the [“Designing an Assessment Strategy and Use of SME-Based Assessments”](#) training courses. These courses are created to educate the Federal HR community on the fundamentals of designing an assessment strategy and using subject matter experts (SMEs) to develop competency-based assessments using cut scores for their competitive examining positions. The first course, Course 1: Designing an Assessment Strategy: Fundamental Concepts, Processes and Applications, is structured to provide employees with the foundational knowledge of core concepts, processes, and practices about Federal hiring policies and its’ authorities, the importance of a job analysis, and considerations for designing an assessment strategy. The second course, Course 2: Use of Hiring Assessments: A SME-Based Approach, is an interactive audio-based course that provides in-depth information on the steps to develop and score various competency-based assessments in collaboration with hiring managers and subject matter experts.

The “Designing an Assessment Strategy and Use of SME-Based Assessments” courses are available on the [OPM WPI Virtual Training Center](#). For detailed instructions on course registration and Frequently Asked Questions, refer to page 3 of the [Memorandum to HR Directors \(December 2023\)](#).

OPM will continue to provide resources and guidance to support Federal agencies implementation of AI policy, tools, and guidance. For questions related to assessment, please contact OPM’s Classification and Assessment Policy team at assessment_information@opm.gov.



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