NGA has identified the following specific eNGAge requirements. This list will be updated as new requirements are identified and as eNGAge opportunities are filled.

eNGAge Out – Requirements for NGA employees to have immersive experiences with industry or academia

Geodetic Survey Program

NGA Source Applied Sciences has identified a training and development requirement for a member of Team GEOINT to work with industry or academia for up to one year to enhance capabilities and help define future needs and capabilities for the Geodetic Survey Program.

The ideal industry host would be a survey instrument company, terrestrial LIDAR developer, or developer of new gravity or geodetic collection methods.

New Gravity and/or Magnetic Data

NGA Source Applied Sciences has identified a training and development requirement for a member of Team GEOINT to work with industry or academia in the area of new gravity and/or magnetic data collection, processing, and analysis to help NGA improve technical capabilities in this area.

The ideal industry or academic host would be an expert in gravity and/or magnetic collection, analysis, and modeling methods.

Atomic Clock Performance and Characterization

NGA Source Applied Sciences has identified a training and development requirement for a member of Team GEOINT to work with industry or academia in the area of atomic clock performance and characterization to help NGA improve technical capabilities in this area.

The ideal industry or academic host would be an expert in atomic clocks both terrestrial and satellite based

Machine Learning

NGA Analysis has identified a training and development requirement for a member of Team GEOINT to work with industry or academia for approximately 1 year to enhance capabilities and support the requirement for gaining alternative perspectives on convolutional neural network machine learning and algorithm development.   The Team GEOINT member would learn by working with the development of convolutional neural network machine learning systems and algorithms.

The ideal industry or academic host would be a company or organization currently developing convolutional neural networks for machine learning, specifically computer vision.

Machine Vision

NGA Analysis has identified a training and development requirement for a member of Team GEOINT to work with industry or academia for approximately 1 year to enhance capabilities and support the requirement for gaining alternative perspectives on algorithm development and signal processing for machine vision, object detection, and feature extraction. The Team GEOINT member would learn by working with a team to develop algorithms for machine vision in imagery.

The ideal industry or academic host would be a company or organization currently develops and uses signal processing and algorithm development for machine vision, object detection and feature extraction from EO, SAR, MSI, or HSI overhead imagery.

Industrial-Organizational Psychology

NGA Human Development has identified a training and development requirement for a member of Team GEOINT to work with industry or academia for approximately 1 year to enhance capabilities and support the requirement for simulation techniques that improve understanding of employee behavior across the employment lifecycle (selection through attrition). The Team GEOINT member would learn by working with the design, development, and use of simulation techniques and technology using human capital data.

The ideal industry or academic host would be a researcher at the forefront of simulation techniques and technology with experience working with human capital data.

Human Capital Data Science

NGA Human Development has identified a training and development requirement for a member of Team GEOINT to work with industry or academia for approximately 1 year to enhance capabilities and support the requirement for human capital data science. The Team

GEOINT member would learn cutting edge analytic models and data science methodologies that deliver the right insights at the right time to human capital decision makers.

The ideal industry or academic host would be an industry partner that is at the forefront of human capital data modeling, predictive analysis, and visualization.

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eNGAge In – Opportunities for Industry and Academia to join Team NGA for an immersive experience

Business Financial Data Expert

NGA Financial Management is seeking a Business Financial Data Expert to join Team NGA for one year to help lead the design, development, and implementation of an overarching financial data and information strategy that leverages existing and future Financial Management systems, along with industry and commercial best practices supporting multi-million dollar operations.

The ideal eNGAge participant from industry or academia will have considerable experience designing and operating financial management systems utilizing large data analytics serving issues around auditability, and corporate resource decision-making.

Source Applied Sciences - Multiple

NGA Source Applied Sciences has identified several areas where opportunities exist for formally trained scientists from industry or academia to join Team GEOINT for assignments (up to one year) to help fill knowledge and skill gaps in key and emerging areas requiring scientific expertise, specifically:

1. Core geophysical sciences including gravity collection, processing, modeling and analytics
2. Core geodetic sciences including datums, grids, projections, and transformations
3. World magnetic modeling
4. Core orbital sciences including generating precise ephemeris, Earth Orientation Parameter Prediction, Ocean Loading, Satellite Radiation Pressures, atomic clocks, and terrestrial/celestial reference frames.
5. Core photogrammetric sciences including precise positioning, triangulation, orthorectification

6. 3D surface generation and editing (including DTMs and DSMs) using point clouds; new and emerging DEM generation capabilities
7. Core geodetic surveying and terrestrial LIDAR

The ideal eNGAge participant for these opportunities will have expertise in one or more of the areas noted above, the ability to provide training to NGA analysts on new and emerging techniques and processes in their field of expertise, and skill in knowledge transfer to help NGA meet mission requirements.

.**Service Management**

NGA IT Services is seeking an Information Technology expert or System Engineer to join Team NGA for one year to transform government workforce management services provided by a combination of software solutions

The ideal eNGAge participant from industry or academia will apply in-depth knowledge and experience with Applications Architecture, Business Intelligence Concepts, Cloud Computing, Database Technology, Mobile Content Provisioning and Network, Software, and Web Design enabling the end-states desired for government business systems solutions and personnel skillset management.

Agile/DevOps

NGA IT Services is seeking a System Engineer to join Team NGA for one year to transform systems acquisition and development by applying Agile and DevOps constructs and processes to enhance efficiency and improve current acquisition and development timelines.

The ideal eNGAge participant from industry or academia will apply in-depth knowledge and experience of Agile and DevOps practices supporting the transition to agile systems acquisition. Formal certifications aligned with industry standards to include SAFe Agilist and SPC Certified are desired.

Modeling and Simulation

NGA IT Services is seeking a System Engineer to join Team NGA for one year to support Modeling and Simulation involving sizing and optimization of storage, compute, and transport in support of cloud-based solutions delivering optimal user experience.

The ideal eNGAge participant from industry or academia will be a modeling and performance analysis expert, with knowledge in network optimization, big data, cloud technology, and current modeling and simulation applications/tool suites.

Cloud

NGA IT Services seeks a System Engineer to lead the design, development and implementation of an Enterprise Cloud solution utilizing new and emerging disciplines and innovations to support industry and commercial best practices with a focus on security.

The ideal eNGAge participant from industry or academia will have considerable experience designing, developing and implementing large-scale cloud solutions with background and expertise in agile development, web service design, and cloud infrastructure for multiple security fabrics.

Enterprise Data Services:

NGA IT Services seeks a data engineer to support creation of a new architecture, services, policy governing data, including the large scale effort to tag, validate, and encapsulate data for delivery to the cloud as well as services to translate and transform data to optimize it for exploitation and analytics.

The ideal eNGAge participant from industry or academia will have considerable experience leading data engineering, web service development, data analytics and Cloud related initiatives on a large scale (is there a "reference" that makes clear what the scale we are looking for is?).   Skills required in server side RESTful, SOAP, and web service development and experience in test-based development, continuous integration, knowledge of JAVA, SQL and No SQL databases are expected.

Security Engineering

NGA IT Services seeks a Security Engineer with background in perimeter, host, and transport layer security and defense-in-depth concepts in data center and cloud environments that is able to define security requirements and develop solutions based on data center to cloud migration processes.

The ideal eNGAge participant from industry or academia will have extensive knowledge of physical and virtual security solutions and their applications as defined by the NIST 800-53 set of controls in accordance with the Risk Management Framework (RMF). Required certifications: CISSP or CASP and CCSP. Experience with SecDevOps is highly desired.

Machine Learning

NGA Analysis is seeking a scientist or expert in convolutional neural network machine learning to join Team GEOINT for up to a one-year immersive experience in our Applied Sciences office, to work on advancing NGA's understanding of machine learning techniques.

The ideal eNGAge participant from industry or academia will apply in-depth knowledge and experience with convolutional neural networks, machine learning, and algorithm development for machine vision, object detection, and automated entity extraction to help NGA develop automated machine vision systems.

Machine Vision

NGA Analysis is seeking a scientist or engineer to join Team NGA for up to one-year immersive experience in our Applied Sciences office to advance NGA's understanding and application of machine vision techniques for overhead imagery.

The ideal eNGAge participant from industry or academia will have experience with signal processing and algorithm development for machine vision, object detection, and feature extraction from EO, SAR, MSI, or HSI imagery and will apply their in-depth knowledge and experience to developing automated detection capabilities for NGA.

Industrial-Organizational Psychology

NGA Human Development is seeking an Industrial-Organizational Psychologist to join Team NGA for one year to advance NGA's ability to use cutting-edge measurement, analytic, and simulation techniques to obtain or improve meaningful organizational outcomes.

The ideal eNGAge participant from industry or academia will apply in-depth knowledge and experience with advanced measurement, psychometrics, and simulation techniques and technology to further NGA's understanding of the workforce across the employment lifecycle and identify recommendations to improve workforce performance.