

Cognitive solutions

Unlock hidden insights by adopting artificial intelligence, machine learning and advanced data technologies to drive intelligent outcomes



Benefits

- Augment human intelligence and create efficiencies in manual processes
- Unlock hidden insights in vast amounts of unstructured data (ex. text, voice)
- Reduce operational costs with greater consistency
- Exploit the latest advanced analytics technology
- Improve data-driven decision making
- Apply proven design patterns in a flexible framework that rapidly adapts to changing missions

Today's information revolution requires innovative solutions to unlock the hidden value of data for strategic advantage. Perspecta's cognitive solutions offering includes a portfolio of capabilities including rapidly developing technologies for artificial intelligence (AI), machine learning (ML), computer vision (CV) and other advanced data technologies that enrich a data ecosystem and enable the ability to attain deeper intelligence.

The rapidly evolving marketplace of commercial technologies complicates trade studies and architecture selection. We help you select the right technology to address your mission and business needs, based on our experience delivering cognitive solutions for our U.S. government customers in intelligence, defense, civilian and federal health care markets. We focus on integration across your data ecosystem and provide solution accelerators to take full advantage of your investment. By providing ongoing support along the way we continually optimize your solution to maximize mission outcomes.

Our approach

Our commercially-based approach implements industry-leading algorithms within a flexible, scalable framework that enables rapid development and deployment of tailored solutions. Perspecta provides full end-to-end services including architecture, modeling, standards development, integration, testing and operation to discover key insights and develop actionable knowledge.

Our cognitive solutions empower your team's mission and business decisions, making more information available and beneficial throughout the decision-making process. We develop tailored approaches and innovative ideas that can be embedded in automated operations, reducing process inefficiencies, lowering costs and improving the quality of decisions.

Our experts deliver knowledge of multiple AI/ML techniques and their implementation pros and cons across government and commercial applications. Perspecta Labs, our innovative research lab performs

industry-leading cooperative AI/ML research with DARPA, and we partner with leading vendors, labs and universities to maintain a pipeline of talent and a pulse on the latest capabilities. With this team, we can provide a flexible framework for evaluating algorithms against large data sets, assessing algorithmic maturity and testing end-to-end approaches to large-scale problems.

Insights from the Internet-of-Things

The Internet of Things (IoT)—the ecosystems of sensor-dense, Internet-connected devices—is the fastest growing segment of big data. Streaming data from billions of devices drives changes in data architecture and analytic approaches, but the ability to exploit this data can lead to optimized operations, increased workforce productivity, reduced risks, reduced operating cost and optimized maintenance.

At Perspecta, we understand how to integrate the right technologies to move data in real time from the edge of the customer ecosystem to decision points—sensors, security, storage, processing, control and analytics—to maximize the benefit and minimize the risk from IoT investments. Analyzing multiple discrete data sources can even uncover correlations, dependencies and patterns that lead to new insights. We integrate information and turn it into valued insights to beneficially impact operational processes.

Applying cognitive solutions, we have demonstrated an innovative approach to facility security using existing devices to determine patterns-of-life. Our solutions team developed a real-time streaming architecture for IoT processing in the cloud, deploying an application to identify anomalous patterns and flag suspicious behavior. We augmented this approach by integrating cybersecurity data to demonstrate a comprehensive insider threat protection system developed and deployed rapidly over a period of weeks.

Exploiting commercial satellite imagery

The explosion of commercial satellite imagery provides opportunities and challenges to develop insights from space. We applied our cognitive solutions framework to a government-provided overhead imagery data set, implementing an advanced processing solution to recognize objects in open source imagery. Perspecta developed unique methods for measuring algorithmic accuracy. We demonstrated approaches for ensemble models that combine multiple techniques to improve the overall accuracy for rare objects—a key challenge for intelligence agencies, homeland security and hedge funds.

Unlocking enterprise value

Implementing cognitive solutions at scale requires a comprehensive approach to enable secure data, manage disparate holdings, scale processing to the cloud, deliver timely insights and manage costs.

Perspecta's approach can help balance your computing network at the edge where it's needed and in the cloud to optimize latency, insights and total cost of ownership. We can enable the right analytics environment to take advantage of predictive analytics or augment your current big data architecture to provide a seamless platform for insights to drive your mission.

Our experts work closely with your business to demystify a complex and rapidly advancing field, delivering knowledge and capabilities tailored to address real-world problems. Our teams help you to:

- Identify AI applications with the highest potential business value
- Turn unused data into potential sources of business insight
- Rapidly develop, deploy and test cognitive solutions proofs of concept
- Quickly turn prototypes into fully functioning enterprise platforms
- Build a flexible platform that efficiently scales to process the data needed
- Incorporate security, data handling and data management requirements including data lineage and auditable logs for regulatory compliance

We provide customers with the capability to fast-track deployments of new technology and analytic applications with modern data architectures, right-sized solutions and deployment options that scale to address the challenges of your mission.