

# Azure Government: Reaching new frontiers with data and AI

Every day, federal workers create and analyze massive amounts of data—from weather forecasts to health statistics. This proliferation of data creates challenges and opportunities for federal agencies. Azure services like artificial intelligence (AI), machine learning (ML), and Cognitive Services help you analyze big data to deliver insights that improve your operations and strategy.

## Top 3 business benefits expected for AI

► Increases employee  
productivity

► Increases process  
automation

► Uncovers  
new insights

Tap into unlimited resources to scale challenging workloads, such as analyzing large-scale data and running simulations, in order to make better decisions faster and enhance citizen services.

**40%**

of data science tasks automated by 2020, increasing productivity and broadening usage by citizen data scientists <sup>2</sup>

**Power big data with supercomputing to crunch the biggest problems facing government today**

Take away mundane tasks, freeing employees to do critical work and allowing your agency to focus on reducing backlogs.

**96.7  
million**

working hours saved annually by automation in federal government alone, freeing up billions of dollars and more time for employees to innovate <sup>3</sup>

**Deliver intelligence to systems at the edge—and better inform at the ground level**

Azure Government with Azure Stack provides the only truly consistent hybrid cloud platform that can support Internet of Things (IoT) and analytics—from the cloud to the edge, and everywhere in between.

**Work smarter every day with Microsoft Cognitive Services**

**30%**

of government agencies with cloud-first strategies to use public cloud for all new initiatives by 2020 <sup>1</sup>

**Catalyze data and ML innovation to turn data into insights and better serve constituents**

**40%**

growth in federal government investment in unclassified R&D for AI and related technologies since 2015, plus substantial classified investments in defense and intelligence <sup>4</sup>

**30%**

of federal employees' time expected to be recovered through AI <sup>3</sup>

Analyze data rapidly with ML technologies—boosting computational processing power—and return actionable intelligence quickly. Empower users of all skill levels to quickly develop and deploy predictive models.

<sup>1</sup> <https://www.gartner.com/doc/reprints?id=1-4KWZY7K&ct=171121&st=sb>

<sup>2</sup> <https://www.gartner.com/doc/reprints?id=1-4MLA3QU&ct=171220&st=sb>

<sup>3</sup> <https://www2.deloitte.com/insights/us/en/focus/cognitive-technologies/artificial-intelligence-government-analysis.html>

<sup>4</sup> <https://www.whitehouse.gov/briefings-statements/artificial-intelligence-american-people/>



## Turn data into insights with data and ML innovation

Use advanced ML algorithms and AI services to analyze massive volumes of data and gain rich insights to improve operations and long-term strategic advantage.

**Help the IRS find anomalies** in filed tax forms, automatically flagging potentially fraudulent submissions.

**Enable smarter traffic management applications** by using wait time, fuel usage, and emissions data.

**Use a predictive model** to comb government records—from sectors like health, justice, and employment—to generate a risk score.

**Achieve faster intrusion, botnet, and anomaly detection;** malware analysis; and fusion of cyberthreat intelligence.

**Help teams adapt faster** with predictive models using Azure Machine Learning Studio, a fully managed cloud service, to easily build, deploy, and share predictive analytics solutions.



## Power big data with supercomputing

Use advanced ML algorithms and AI services to analyze massive volumes of data and gain rich views and analysis of data—without the heavy lifting of traditional physical data integration.

**Gain capacity** with high-performance computing (HPC) to bypass the overhead and limitations of on-premises infrastructures.

**Analyze satellite and seismic data** to detect patterns and help anticipate natural disasters and city infrastructure vulnerabilities.

**Use data from hospitals,** accident/disease reports, and social services files to assess healthcare needs. Combine this data with socioeconomic data to

determine needs for health or social services, ambulance and emergency facilities, and other services.

**Analyze vast networks in real time**—including wireless sensors and cameras, transportation grids, and social media—to improve emergency services.

**Use data from sensors and smart cameras** to ensure safer roads, optimize routes, create new routes, and manage traffic and parking.



## Free up employees with Microsoft Cognitive Services

Customize content with intelligent algorithms to see, hear, and understand your audience with Cognitive Services. Use capabilities such as image and video processing and voice/text translation to enable teams to derive new intelligence.

**Use Microsoft Cognitive Services and Azure Bot Service** in call centers to guide citizens through conversations in a personalized user experience.

**Help citizens answer questions** about government services and policies with natural language processing. Add emotion/sentiment detection, vision/speech

recognition, and language understanding and search into chat across devices.

**Use Cognitive Services APIs** for voice recognition, live translation of languages, and image analysis to ensure accurate translations.

**Discover root causes** for chronic unemployment. Analyze historical case data with cognitive technologies to tailor strategies to help people find jobs.



## Deliver intelligence to systems at the edge with Azure Stack

Ensure consistent data collection through the Azure Government hybrid approach, no matter the data source. Use Azure to avoid employing additional tools or processes that endanger sensitive information.

**Get visibility into trends and anomalies** with Azure IoT Hub, rapidly querying terabytes of data from millions of sensor events together with volumes of historic data to support decision making in command and control situations.

**Gain a current view of available data** with Azure Stream Analytics by running massively parallel real-time analytics on multiple IoT or non-IoT data streams

to immediately identify environmental changes.

**Meet regulatory requirements** when international outposts can't use the local cloud for data or applications because of data sovereignty laws.

**Integrate Azure Stack with Azure Government** to maintain connections to Azure Government across identity, subscription, billing, backup and disaster recovery, and Azure Marketplace.

## Attend the webinar to learn more

See how the cloud is helping bring together machine and human potential.

Join Lily Kim, General Manager of Azure Government and Rohan Kumar, Corporate Vice President of Azure Data.

<https://info.microsoft.com/ww-live-reaching-new-frontiers-data-ai.html>