

DELL TECHNOLOGIES

The endless possibilities for AI-powered problem-solving

Agencies have only scratched the surface of AI's ability to solve complex government challenges



Daniel Carroll
Dell Technologies

The federal government has been at the forefront of developing and leveraging artificial intelligence to solve problems since the 1960s, but those efforts haven't always generated the publicity that AI has recently received. Two key things have driven this leap forward in both capability and visibility: processing power and commercialization.

At Dell Technologies, we have worked with federal agencies to understand their mission needs and have developed hardware solutions that can condense the number of GPUs, FPGAs and other processing elements into cost-effective products.

The thing that has really shined the spotlight on AI, though, is commercialization. Growing demand for personal computers accelerated in

“When agencies find appropriate ways to overcome barriers to sharing data, the challenges that can be solved are infinite.”

the late 1980s, driving down prices and encouraging companies to bring more affordable, diverse options to market. The rise of affordable cell phones is another example. AI technology is following that same trend.

Transforming workforce training and service delivery

Today, AI has an important role to play in addressing government challenges. For example, in the IT field, agencies need to be able to quickly train talented young professionals to step into more advanced roles. In the past, it could take someone 10 years to gain the knowledge needed to work effectively on a government program. Yet most agencies have large amounts of untapped data on the experience and insights of senior employees. With generative AI, a newer employee could access that stored history to achieve those goals in a much shorter timeframe.

In addition, the government provides a variety of valuable services to its citizens and its workforce. Military personnel interact with military or veterans' hospitals, for example. Personalization could transform the delivery of those services. Generative AI could pick up on patterns in how someone asks questions or makes selections and then automatically adjust its responses to provide more detail or guidance.

Applying AI to secure, reliable government data

The federal government creates massive amounts of data every day that can be leveraged to develop AI solutions, but that data is worthless if isn't reliable and secure. Reliability involves understanding where the data came from

iStock



and its original intended purpose. Was it gathered and cataloged effectively to be usable for the AI models an agency wants to build?

Security comes from understanding where the data is housed and how it was sourced. Who had access to it, and could it have been manipulated? Is its integrity protected when it's in motion?

In addition, when agencies find appropriate ways to overcome barriers to sharing data, the challenges that can be solved are infinite. For example, during the COVID-19 pandemic, being

able to analyze massive amounts of patient data was crucial to ensuring a robust response to the crisis. However, there were a lot of restrictions on how the data could be used due to privacy concerns.

Dell worked with 200 hospitals to implement a federated learning model of local AI solutions that analyzed data within the individual hospitals and pulled only the relevant inferences related to the disease and the efficacy of patient care. Higher-level health care organizations reviewed the inferred data to make better decisions and

provide guidance on care without impacting patient privacy.

This is an example of how large language models and massive amounts of data can solve practical challenges. Now let's expand that type of solution to other government challenges — such as disaster response, airport security or mail delivery, to name just a few. The possibilities for AI-assisted improvements truly are endless. ■

Daniel Carroll is field CTO for cybersecurity at Dell Technologies.

DELLTechnologies

carahsoft.



Bring AI to Your Data With the Broadest Generative AI Portfolio

For more information, please visit Dell.com