DATA SHEET

Machine Learning Applications for Federal Departments and Agencies

Overview

The digital transformation of government operations is creating increasing volumes of data. The White House Office of Management and Budget has a goal to "Leverage data as a strategic asset to grow the economy, increase the effectiveness of the Federal Government, facilitate oversight, and promote transparency."

In fulfilling their mission and responsibilities, the departments and agencies of the Federal Government deliver outcomes from major, multiyear programs with profound impacts on the lives of citizens. At the same time, they safeguard the interests of the taxpayer by protecting the integrity of grants and guarding the national economy against fraud and other financial crimes.

While data and AI are natural allies to deploy in the battle against improper payments and fraud, success with AI is elusive. **Surveys indicate that only one in three AI projects succeed.**

Projects can be plagued by obstacles throughout their life-cycles, making it difficult to attain a feasible solution. Manually building machine learning models of high predictive accuracy can mean months of work, while embedding AI into new or existing systems, has a very high rate of failure. In addition, technology that generates "black box AI" makes it impossible for stakeholders in a project to understand the reasons in driving predictions, which, in turn, undermines confidence in the AI solutions. These situations are compounded by the shortage of applied data scientists with technical expertise and public sector experience.

> Success with AI is founded on bringing together an enabling technology with appropriate qualitative factors. The technology must span the departments and agencies to foster collaboration between everyone involved in creating and managing A and expanding the capacity of existing analytics teams by making the most of their skills and experience to raise their productivity.

By adopting an enabling technology, while acquiring the requisite qualitative factors, the departments and agencies analytics teams focus their attention on the most feasible use cases to solve challenging problems. Early momentum and repeated success ensure they achieve an advanced level of competency in AI.

Qualitative factors required to succeed include:

- Developing a competency in AI for many individuals with different skill sets and experience;
- Encouraging collaboration and transparency across multiple teams;
- Promoting motivation for process change;
- Establishing trust in the AI that colleagues create so that teams learn to depend on it and derive actionable insights and augment their decision-making.

DataRobot helps the Federal Government unlock the value of data as a strategic asset by capitalizing on the promise of AI, while avoiding obstacles that derail deparments and agencies attempting the work with inappropriate or immature technologies. With the world's most trusted Enterprise AI platform, DataRobot offers trusted AI Success enablement for skills transfer that is proven to help the Federal Government departments and agencies deliver AI projects with positive results.

While there are countless applications for AI in the Federal Government, three areas where AI can enhance effectiveness are program management, grant integrity, and fraud prevention.

AI to protect the integrity of Federal grants

Federal Government grant programs generate a trove of data that departments and agencies can analyze to enable effective oversight of their grant review and management processes. By analyzing the outcomes of programs that previously received grants, predictions can be made on the types of projects or grant programs that are likely to lead to beneficial outcomes and shut down sources of potential loss by identifying patterns of felonious behavior.

AI to reduce improper payments and protect against fraud

Fraudsters constantly adjust their tactics, which means that departments and agencies must continuously evolve their defensive responses. DataRobot accelerates the rate at which a department can modify existing machine learning models, or create new ones, and put these to work to prevent fraud and abuse by uncovering new and emerging threat vectors in huge volumes of data generated in every grant's post award phase. The AI created with DataRobot is transparent, explainable, and defensible so that staff at the front lines understand and trust the insights it generates to take effective actions. With AI, departments and agencies can prevent fraud before payments are made and eliminate costs of unnecessary investigations.

AI to improve program management:

For Federal Government programs to deliver their intended outcomes, program managers must collect and analyze data from multiple interrelated projects. AI supports department and agency staff in program leadership and governance, project planning, managing and monitoring. Machine learning reduces project risk and uncertainty by:

- Predicting duration of tasks and verifying against actual time required
- Forecasting staffing and supply utilization to optimize scheduling
- Identifying bias such as overly optimistic work schedules
- Recommending where scarce resources are best allocated
- Generating metrics indicative of the health and progress of a program

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