# Innovative AI Solutions | A Success Story

Like most people, I love a good success story. And this one is particularly meaningful to me, because it involves one of the participants in a course I help lead at the Partnership for Public Service, the AI Federal Leadership Program. This program educates agency decision-makers on the opportunities around AI, highlights best practices, and prepares agency leaders to incorporate AI technology into their strategies.

Last year, Eric Stein, the Deputy Assistant Secretary for Global Information Services at the US State Department took the class and used it to tackle a problem he was facing. What do you do when you are charged with running the declassification review programs for your federal agency, but you are going to run out of resources to meet your mandated deadlines for release of information? As required by Executive Order 13526 on Classified National Security Information, an automatic declassification date for classified information kicks in after 25 years. However, agencies still need to review all the documents to see if declassification is warranted. That means in 2023, documents that were created in 1997 are being reviewed.

Stein realized he had a big problem looming at the State Department in the not too distant future. For 1997, a little over 100,000 classified cables and almost no classified emails needed review. However, looking ahead a few years, Stein found that by 2005, over 600,000 classified cables and a growing number of classified emails would require review each year. He realized that the current processes and resource levels were not going to be sufficient to review exponentially growing amounts of electronic records created in the early 2000s and beyond, and by 2025 the declassification reviews would not succeed using existing technology and manual processes.

Fortuitously, Stein found some help through the course offered by the Partnership for Public Service. “I almost didn’t apply for the AI Program at the Partnership for Public Service due to other commitments and demands,” says Stein. “Without this program, I don’t know if we would have developed this pilot and solution that allows us to review such large volumes of data and information.”

Taking on the declassification problem as his class project, Stein conceived of a pilot project that would use machine learning algorithms and other technologies to help reduce the time needed to review classified documents. One aspect of the class is an emphasis on the need to collaborate with others in your agency. Successful AI projects need not only to meet a critical mission need but also should take place within a data and AI governance structure. Often this means bringing in the Chief Data Officer and others to help design and carry out a project. “Discussions about data and partnering with Chief Data Officers (CDO) at agencies encouraged me to propose the pilot to our CDO. Our offices already had an existing relationship, but this pilot has strengthened our partnership”, according to Stein. He brought in the State Department CDO, Matthew Graviss, a knowledgeable, innovative, and willing partner. “An executive’s understanding of AI is a powerful tool in driving change within his or her organization. I have seen first-hand how Executive AI trainings foster the education, discussion, and creativity needed to seize opportunities for innovation.” said Graviss. “In combining the data science talent we have in M/SS’ Center for Analytics (CfA) with the vision of a true data and AI champion like DAS Stein, we have

transformed what began as innovative ideas into real agency improvements. This pilot has shown the power in partnerships across organizational lines, and I am thrilled to have the CfA play an integral part in this effort to move the Department forward."

Together Stein and Graviss led a successful pilot project that ran from October 2022 through January 2023. According to State's 2023 FOIA Officers Report, "This pilot trained a model to conduct declassification reviews of electronic cable records (i.e., communications between Washington and overseas posts such as embassies and consulates) by using past declassification decisions from human review from 1995-1997. The model was trained on human review decisions to identify cable features that are typically indicative of information that is released and that which is exempt from release. The results were reviews that were 97%-99% in agreement with the human reviews. In 2023, the Department plans to leverage this model to complete the 25-year review of cables from 1998. The manual review process takes an entire year; the machine learning review takes 20-30 minutes to assign a declassification decision to every cable. In the 2023 review, over 72,000 cables (63% of the annual total) were assigned confident decisions by the model, requiring only minimal human quality control. The remaining cables will be decided by human review. This process also includes several quality-control steps and reviews of what the technical model says can be declassified and exempt, as well as additional controls to look for highly classified or sensitive information. Leveraging this model will include both technology and human review moving forward, not just one or the other."

An important part of the project was to establish goals and a timetable. The first goal was to test the algorithm against the 25-year electronic data that was reviewed in 2021 to determine baseline response from a completed review. Next, the project ran the algorithm against the 25 years electronic data that was currently going through the manual process and compared the results with the manual review. That enabled the pilot to reach its third goal, establishing a baseline of terms and factors for the 25 years declassification review scheduled to occur in 2023.

The pilot **r**eviewed electronic classified (CONFIDENTIAL and SECRET) permanent records that were 25 years old in 2022. It used the State Department's AI and machine learning capabilities in the electronic records archive storing these records, as well as existing data scientist resources at the Department. Paper classified records (CONFIDENTIAL, SECRET, TOP SECRET) that were 25 years old in 2022 were deemed out of scope for the pilot.

With major successes achieved, Stein and Graviss determined to continue the machine learning work through the rest of 2023, in order to explore additional records that could undergo review in addition to Department cables. They are also developing a new pilot for Freedom of Information Act (FOIA) activities to explore machine learning searches of centralized records and potential initial responses for newly received requests for information that have already been processed in the past by the Department. The goal here is to improve FOIA response times and customer experience.

Both Stein and Graviss have been pleased with the results they have achieved through partnering on the AI initiative. According to Stein, the boost he got from the Partnership for Public Service course was a factor in their success. "The course helped to develop understanding about AI concepts and practices including ethics, bias, and policy considerations. Knowing these principles

helped design a successful pilot.” Congratulations to both Eric Stein and Matthew Graviss for showing how innovative AI solutions can be conceived, developed, tested, and implemented in relatively short timeframes to achieve major efficiencies and hoped for results.

Dr. Nancy Potok
former Chief Statistician of the United States and Senior Fellow at The George Washington University