Improve Citizen Engagement With Natural Language Processing

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Business Impact

"Across government, whether in defense, transportation, human services, public safety, or health care, agencies struggle with a similar problem – making sense out of huge volumes of unstructured text to inform decisions, improve services and save lives. Text analytics, and specifically NLP, can be used to aid processes from investigating crime to providing intelligence for policy analysis."

Deloitte, *Using AI to Unleash the Power of Unstructured Government Data*

Challenges

- **Inefficient case management.** It is difficult for governments to provide the breadth of services using manual approaches that leave case managers overwhelmed when trying to understand, manage and effectively respond to individual needs.

- **Delayed service delivery.** Engaging and interacting with government agencies is often hindered by long wait times as the staff struggles to coordinate a high volume of inquires across many points of contact to determine the best resolution for a given situation.

- **Rapidly assessing public sentiment.** Governments seeking feedback on new policies, programs, regulations or legislation are often unable to efficiently review responses or understand citizen sentiment due to the labor-intensive process of tracking, assessing and incorporating public comments.

The Issue

More than ever, citizens expect their engagement with government to be digitally driven and personally tailored. As citizens engage with retailers, banks and other private-sector institutions, they see a distinction between their private sector experience and engagement with their governments.

This widening gap is due to the scale of citizen engagements that governments must manage. Every day, hundreds of millions of citizens contact government agencies regarding filing taxes, asking questions about health benefits, commenting on regulations and everything in between. Agencies have traditionally taken human-centered approaches to citizen engagement by hiring more and more staff to try and keep up.

Many digital e-government attempts have fallen short because they tried a one-size-fits-all approach. The truth is, agencies vary greatly in their requirements to meet citizen needs. Your agency's citizen engagement strategy should enable you to directly and dynamically engage citizens in a personal way to help improve government effectiveness, citizen experience and the quality of services.

Our Approach

By using natural language processing (NLP) to analyze large volumes of unstructured text data, you can rapidly examine information to gain meaningful insights. We deliver software and services to help you:

- **Improve collaboration and transparency** in case management by using best practice templates and methods throughout the organization, tracking staff access and annotations to records and integrating with existing systems.

- **Respond quickly and accurately** to citizen inquiries by providing real-time recommendations for action based on rapid categorization of call center transcripts, social media conversations or web chat information.

- **Uncover trends and spot opportunities for action** as public comments are submitted, while also having the flexibility to explore how trends change over time.

- **Understand public sentiment** by analyzing social media sites to determine how dimensions of interest change and adjust your decisions based on citizen perspectives.

Citizen comments help government agencies better serve the public. Citizen feedback can take many forms – a suggestion-box comment, an online survey or complaints posted on social media. Modern NLP capabilities for automated information extraction and routing can make sure citizens (and your staff) are best served with the services and answers they need. You can use SAS to:

- **Reduce citizen complaints.** Using NLP, you can analyze data from emails, surveys, call centers and other sources to identify the causes of dissatisfaction and implement improvements.

- **Uncover emerging trends and spot new opportunities for action.** Automatically convert unstructured data into meaningful insights. Increase the accuracy of text models by combining NLP methods with a rules-based approach that can be enhanced with subject-matter expertise.

- **Promote participatory citizenship.** Governments seeking feedback from citizens on new policies, programs, regulations or legislation are often unable to incorporate public sentiment without the technology and infrastructure to help automate ingestion and improve understanding.

Whether for public safety, human services or health care (to name a few programs), NLP is being used to improve interaction between the public, constituents and their governments.

A benefits delivery agency for a large government

Situation

With more and more citizens receiving benefits, the agency was struggling to keep up with inquiries and questions about benefits claims, eligibility and other aspects of service delivery. Call center wait times were long and growing, and digital channels used by the agency resulted in large backlogs of communication that agency staff struggled to resolve quickly. With budgets and personnel fixed, the agency was increasingly overwhelmed with the volume of interactions with customers across multiple channels.

Solution

NLP solutions from SAS allow the agency to:

- Automatically categorize and route call center engagements, possibly resolving the citizen's issue at first contact.

- Introduce conversational AI (in the form of a chatbot) to quickly determine context and provide near-immediate answers to citizen inquiries, allowing the agency to automatically resolve many issues without staff intervention.

- Reduce wait times and improve customer service across all the agency's digital and voice channels.

Results

Using NLP capabilities, the agency has dramatically increased response rates to citizen inquiries and improved the ability to deliver benefits and services more effectively to the citizens it serves without increasing staff or existing workloads.

Modernize data management

What if you could automate the ingestion, preparation and governance of data by minimizing manual processes while improving quality and timeliness of data management initiatives?

Improve operational efficiency

What if you could quickly find practical information in large agency files to reduce caseload strain and allow staff to focus on making important decisions and taking meaningful action?

Increase citizen satisfaction

What if you could automate the process of listening to and understanding feedback from your citizens to make appropriate adjustments to programs and regulations?

SAS Facts

SAS consistently ranks among the market leaders in analyst surveys of NLP providers.

- SAS serves more than 650 government customers in 134 countries around the globe.

- SAS is a trusted analytics and artificial intelligence powerhouse for organizations seeking immediate value from their data at more than 83,000 sites worldwide.

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