EXAMPLE: MEETING ASSISTANT AI SYSTEM

GovAI Use Case: Meeting Assistant

<<example template, responses in green>>

Template Overview

This document serves as a template for others to create their own tailored use cases. It is meant to illustrate a strategic method for using AI technology in solving challenges in state and local governments.

All sections do not need to be completed when first filling this out. Sections can start as considerations (or blanks), and more information can be added in depth as the use case is continued.

Examples can be found in the AI Use Cases Working Group folder.

Proposed Use Case

In a sentence, what is your use case? What is the question you are trying to answer or problem to solve?

Can meetings be better recorded by using an AI system to transcribe, summarize, and generate action items? This helps meeting participants keep track of meeting details more easily.

Proposed AI

What kind of AI tool is being used and how is it being used? Is it a conversational chatbot or language model? Does the AI use computer vision or audio identification? Is the AI meant for prediction or for studying causal impact?

This project aims to use a language model with natural language processing to transcribe and summarize meetings. The model will use audio identification. The model is used for recording meetings.

Proposed Project Phases

Consider what phases your project might have. Can start with your proposed phases, and update as you progress in your use case. Potential phases could include:

1. **Pilot Program Development:** Assess readiness and explore feasibility.

   Complete a pilot program using meeting transcriptions among a small subset of meetings. Compare manual meeting notes to AI-created meeting notes to compare

quality difference. Are AI-derived notes too general or too specific? Is the AI system missing crucial information?

2. **Implementing system:** Gather data on the performance of the system in the field. Once complete, add that performance report here for other agencies to learn.

   Implement AI meeting transcription across the organization. AI meeting notes will be emailed to all members of the meeting afterwards as a summary.

Potential Benefits

When possible, try to quantify the benefits, like cost savings or added value. Even if we can't assign a number, showing that there are quantifiable benefits can often help.

We anticipate that using a meeting transcription tool will help preserve meetings in a higher level of detail to prevent action items from being missed. This will help participants better follow meetings and bring participants up to speed faster. Additionally, this makes it easier to search through meeting transcripts for a specific term or word to find particular topics.

Immediate benefits

1. **Reduce cost and time:** Having a quick summary of the meeting makes it easier for everyone to remember what happened last time. Additionally, some speakers speak too quickly or quietly for every participant to follow along. Having a meeting transcript in live time helps participants follow along the meeting.

Wider Applications

1. **Recording meeting transcripts:** Automatically creating a centralized database for the meeting transcripts to be sent to streamlines the meeting summary and takeaway process. This also ensures that it's easy to find meeting transcripts and summaries for participants to pick up where they left off last time.

System and Project Challenges

What kind of challenges do you anticipate in implementation? Can be very general in the planning phase as just considerations. As you implement your use case, add the major hurdles you experienced.

1. How well AI model works:
   a. Metrics used: How well does the AI model adapt to different kinds of notetaking and priorities? Is it more efficient to use AI or more efficient to have a designated notetaker? Does the AI work better in live meetings or over Zoom meetings, and is the number of Zoom meetings worth using an AI transcription model?
2. Privacy concerns:
   a. Is protected information discussed in these meetings, and if so, how should the information be handled?

   b. Are meeting participants comfortable with having transcripts of what they say stored in a central database?
3. Cybersecurity concerns:
   a. Is sensitive information discussed, e.g., cybersecurity protocols, and should that information be redacted?

People/Domains to Involve

Who or what groups need to be involved in this project? Where possible, consider when they should be involved as well. Some general groups to consider:

1. Agency or department leadership
2. People impacted by system (e.g., general public, applicants for a service)
3. Technical experts, such as the Information Technology Department

1. Information Technology:
   a. IT needs to implement the AI model and the additional support, such as the database or reconfiguring laptops to be able to run the AI model.
2. Legal:
   a. Legal professionals are often needed to navigate regulatory and code challenges.

Risks & Mitigation Strategies

1. **<u>AI Risk</u>**

   What would happen if the AI system were inaccurate or makes a wrong decision? How can you mitigate the risk of the system being wrong, and how can you fix the harm done when the system is wrong? For more detail on AI risk considerations, see BDO for an easy-to-understand resource[1] for an easy-to-understand resource and the EU for original source[2].

   The AI system is low risk – its worst performance would be summarizing the meeting incorrectly and missing crucial information in the meeting. It does not make decisions.

   When the AI system misses crucial information, the summary can be manually updated to reflect missing information. Additionally, summary and meeting transcripts can be fixed after they are created to correct misspellings and incorrect information.

2. **<u>Privacy Risk</u>**

[1] https://www.bdo.co.uk/en-gb/insights/advisory/risk-and-advisory-services/navigating-the-eu-artificial-intelligence-(ai)-act-implications-and-strategies-for-uk-businesses#:~:text=The%20EU%20Commission%20designed%20AI,and%20low%20or%20minimal%20risk.&text=AI%20applications%20would%20be%20regulated,address%20specific%20levels%20of%20risk

[2] https://www.europarl.europa.eu/RegData/etudes/BRIE/2021/698792/EPRS_BRI(2021)698792_EN.pdf

Consider the risk to data privacy that affects residents. What would happen if the data collected was stolen? How can you mitigate this risk, and what plan is in place if data is compromised?

The risk of data privacy is low for residents. Most meetings do not concern protected information about residents.

Mitigating this risk includes storing only meeting summaries and not the meeting transcripts. This removes the level of detail of attributing direct quotes to participants and decreases the possibility that protected information has been stored incorrectly.

3. **Other Risk**

   What are other kinds of risk your organization has to consider?

   Other kinds of risk include risk of new AI guidelines or laws put in place that may necessitate a redesign of the AI system itself due to the training data, how it is used, or changing privacy levels. Other risk includes the AI system developing a bias that leads to the AI system being unable to identify certain issues, which leads to the ineffective use of AI and inefficient use of resources.

Project Resources Needed

What costs do you anticipate or experience in this use case? Some common cost considerations include:

1. Upfront costs
    a. The money needed to purchase a specific AI meeting transcript assistant (otter.AI)
2. Ongoing costs
    a. Ensuring that the AI model conforms to current laws
    b. Ensuring the AI model performs at the expected level
3. Staffing needs, from procuring to managing the system. Where possible, include estimated capacity needed (e.g., number of staff, hours per month for staff)
    a. Require individuals proficient in installing and maintaining AI models and databases
    b. Estimated capacity: 2 staff, each 5hrs a week, total: 40 hrs/month
4. Cost for ending the system or project
    a. Considering what to do when handling the database of meeting summaries – may be cost to remove meeting summaries.

Data Sources

What kind of data does the AI system(s) need? Is this visual, audio, text, etc.? If possible, please include data classification (e.g., person identifiable, HIPAA, etc.), data quality, and data ownership to keep track of the data and when it needs to be updated.

This AI system needs audio data from meetings.

Public Data. Include the specific dataset if data is from a particular department (more applicable to cities or counties).

Private Data

1. Name of dataset: Meeting transcript from IT Department
    a. Owner/maintainer: None.
    b. How to access or collect: Record meeting audio.
    c. Details on dataset: Meeting transcript from meeting.

Combatting AI Bias

What biases did you consider and how are we mitigating them? How can you track if the system is unintentionally impacting different communities differently (e.g., by race, age, gender, skin tone, socioeconomic status, language, immigration status), and how would you go about fixing any unintended bias? See more detail on algorithmic (aka "AI") bias from the Greenlining Institute[3], with industry-specific examples starting on page 8[4]. You can also see a brief video on AI bias from PBS[5].

Biases considered:

1. AI violates definitions of fairness
    a. The AI model should be equally capable of identifying audio and transcribing meetings or creating summaries regardless of who is speaking. Strong accents should not be a problem. Crucial information should not be missed in the summary based on who was speaking.
2. Model is used in a different context than the one that it was trained in
    a. The AI model may have been trained using audio that only used an American accent, and as a result performs poorly when attempting to transcribe audio that has non-American accents.

Mitigating Bias:

1. Values encoded in the AI system are the same as the values intended by the decision-makers
2. Ensure the input data is as unbiased as possible (correcting for historical biases, ensuring that examples from different groups are evenly represented in the data)
    a. Ensure that all training data has a variety of accents from all over the world with participants of all genders and ethnicity to ensure that the AI model is capable of transcribing most audio with high correctness.

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[3] https://greenlining.org/wp-content/uploads/2021/04/Greenlining-Institute-Algorithmic-Bias-Explained-Report-Feb-2021.pdf

[4] https://greenlining.org/wp-content/uploads/2021/04/Greenlining-Institute-Algorithmic-Bias-Explained-Report-Feb-2021.pdf#page=8

[5] https://www.youtube.com/watch?v=gV0_raKR2UQ

3. Ensure the model is being used in the same context as the model was trained in by testing several cases from the use case
    a. Test the model on example problems with solutions to check model performance.