# SCIENCE, TECHNOLOGY, AND PUBLIC POLICY

## michigan municipal league

# Artificial Intelligence Handbook for Local Government

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# Introduction

## Why local governments should care about artificial intelligence?

As the closest form of government to the people, local authorities have the unique opportunity to address real issues that matter on the ground. However, as the needs of residents evolve in the 21st century, local government needs to evolve as well. Artificial Intelligence (AI) offers powerful tools that can improve government efficiency, expand government offerings, enhance community well-being, streamline public services, and make data-informed decisions to improve the quality of life for small and large municipalities. At the same time, local governments often lack the resources and guidance necessary to harness new technologies such as AI safely and effectively. There are few resources available on AI from federal or state governments, and what does exist is often not relevant to the day-to-day operations of local officials. This handbook fills that gap by providing concrete guidelines, best practices, sample applications, and risk assessment strategies that can help kickstart safe and effective AI adoption in local government.

Photo credit: Courtesy of Mackinac Island Tourism Bureau

# Who is this handbook for?

The audience for this handbook is anyone who works in local government at any level, regardless of technical background. While the handbook is rigorous in research and recommendations, it is written to be approachable and not as a technical or legal guide. Instead, this handbook is a jumping-off point for local officials to begin exploring AI to understand its risks and benefits for themselves.

# How to use this handbook?

This handbook has three primary goals:

| Primary Goals of the Handbook | |
|---|---|
| Learn about AI | Demystify AI and provide a clear understanding of its functionality, limitations, and recent advancements that is accessible to all readers regardless of their technical expertise. |
| Explore AI Applications for Local Governments | Examine and analyze AI applications that may benefit local governments. This includes encouraging responsible experimentation with generative AI tools, such as ChatGPT, by providing a step-by-step guide tailored to local officials to understand its impact and limitations. |
| Provide AI Guidelines for Local Government | Provide recommendations for the safe usage of these tools. This includes a chapter dedicated to best practices for using generative AI tools, such as ChatGPT, as well as a checklist for assessing AI tools for local government that local officials can use when deciding to use an AI tool for the first time. |

We hope this handbook encourages you to confidently, responsibly, and safely engage with AI topics and become armed with new knowledge.

# Existing guidelines for AI in the U.S.

> **We recommend that local municipalities be proactive, rather than wait for federal guidance, to best reap the benefits of new AI technologies and mitigate potential risks.**

We recommend that local municipalities be proactive, rather than wait for federal guidance, to best reap the benefits of new AI technologies and mitigate potential risks. As of this writing, there is no comprehensive regulation on AI use or development in the United States. The guidance that does exist is a patchwork of recommendations governed by a mix of the federal government, state governments, the AI industry, and the courts. In Michigan, there is no comprehensive state regulation, proposed or otherwise. [1] To fill this gap, many cities have already begun to be proactive in defining safe AI use policies themselves.

# The view of AI from the U.S. federal government

In October 2023, the Biden administration released an Executive Order on the Safe, Secure, and Trustworthy Development and Use of Artificial Intelligence [2] along with a draft memorandum from the Office of Management and Budget (OMB) [3], which are the U.S. federal government's first entries into the AI regulation debate. While not widely enforceable in their current state, these represent the most detailed look at what U.S. and global AI governance might look like in the future. However, these regulations primarily target AI developers or large federal agencies. Little guidance exists for smaller municipalities on how to address AI at the local level.

# How this handbook was created

This handbook was created from recommendations and discussions with researchers at the University of Michigan Ford School of Public Policy, the University of Michigan Engineering Department, current local officials, and associates from the Michigan Municipal League. These guidelines draw from existing AI recommendations from over 15 other city, state, and national governments. Links to these existing AI guidelines are provided throughout the document. The guidelines in this handbook are consistent with the ethical, responsible, and emerging legal guidelines in the U.S. as of 2024. As AI is a rapidly evolving field, it is likely this handbook will not address many AI applications that will exist in the future. However, the underlying principles of ethical and safe use should be relevant even as new applications emerge. Still, it is best to treat this handbook as a snapshot of the state of AI in September 2024.



Photo credit: Michigan Municipal League

# How Artificial Intelligence Works and Frequently Asked Questions

AI finds patterns in data to make predictions.
Photo credit: https://unsplash.com/photos/a-close-up-of-a-colorful-tile-pattern-8jLboDfuP78

## What is artificial intelligence?

Artificial intelligence (AI) refers to using technologies to create machines that imitate human cognitive functions. [4] These functions include interpreting language, seeing, hearing, and responding to human actions adaptively. AI is a field that encompasses many broad technologies; it can be as simple as a spam filter or as complex as an autonomous robot. However, the exact line between a traditional algorithm and an AI algorithm is blurry.

# What programs use artificial intelligence?

Many more than you realize! You have already been interacting with AI if you have ever used spell check, autocomplete, or gotten a recommendation from Netflix. However, today, when people talk about AI tools, they often refer to general-purpose generative AI programs such as ChatGPT, Gemini, and Copilot. These programs are also often integrated as "widgets" within websites or software. AI can be integrated in visible and non-visible ways in many different modern software applications. Software companies increasingly use AI as a marketing term, making it difficult to understand the actual extent of AI use in a given piece of software.

# What is generative artificial intelligence? (ChatGPT, Gemini, Copilot)

Generative AI is a class of new technologies that produce content like text or images based on inputs from the user. Some examples of generative AI tools are ChatGPT (OpenAI), Gemini (Google), and Copilot (Microsoft). These programs are trained on very large quantities of text or images, and function similarly to advanced chatbots, quickly generating realistic text and images from user input.

# How does ChatGPT (or any other generative AI tool) work?

Believe it or not, ChatGPT works very similarly to the "autocomplete" function when typing in a search bar or texting. [5] ChatGPT is trained on vast amounts of text data and finds patterns in the text, such as what words commonly appear near other words. By identifying these patterns, it can predict what word should likely come next when responding. It works by adding the next word, then analyzing the new sentence, and repeating the process to add the next word, one at a time. The scale of data and underlying algorithm that ChatGPT is trained on, however, makes its predictions much more sophisticated. The most recent version of ChatGPT is trained on billions of pieces of text and image data scraped from the internet. While less intuitive, ChatGPT can also use a similar iterative process to generate images pixel by pixel.

# What is machine learning and "training data"?

Machine learning (ML) is a subset of AI that focuses on algorithms that identify patterns in data to make predictions. [6] These algorithms are widely used in most AI software. Instead of being explicitly programmed, machine learning algorithms analyze large amounts of "training data" to "learn" trends and make informed predictions. This training process may be done in advance using a fixed database of training data or be continuously "retrained" as new data is introduced. These algorithms can find more patterns and improve their performance as they process more data. An example of a machine learning algorithm is the recommendation system used by Netflix, which learns your genre preferences over time based on the shows and movies you watch. In this example, the specific shows and movies you watch are the "training data," and the ML algorithm uses this to predict new shows you might like.

# How does machine learning work?

**There are many types of ML algorithms, but they all share the same goal—to draw insights from a data set.**

There are many types of ML algorithms, but they all share the same goal—to draw insights from a data set. One example is the "line of best fit" algorithm, which involves drawing a trend line that best represents a set of data. For example, imagine plotting the square footage and price of 100 homes in a neighborhood. By finding the "line of best fit" of the data, you could predict the value of a newly built home by knowing its square footage. From the data, the algorithm "learns" the relationship between square footage and the value of a home. This example fits the definition of machine learning because it analyzes a dataset, identifies a pattern, and can use that pattern to make predictions about future inputs. In other words, the linear regression algorithm has "learned" the relationship between house prices and square footage from the "training data."

# What is a neural network?

Newer ML algorithms are much more powerful than a "line of best fit" algorithm and can identify more complex relationships. The most widespread algorithm used today is called a neural network. Unlike traditional software, whose variables are fixed in code, neural networks require "training" on vast amounts of data to adjust their variables before they are ready to be used. [7] Unlike a "line of best fit" algorithm, which may only contain a few variables, neural nets can have millions or billions of variables that need to be adjusted. After training, the neural networks can identify complex patterns from various input data, including images, text, audio recordings, and videos. The structure of neural network algorithms was inspired by how human brains process data using synapses. However, neural networks are not biological processes; they are computer algorithms. Neural networks use terminology borrowed from biology, but they are not analogous to actual brain processes. Their modern-day implementation, first demonstrated in 2012, is one of the several reasons for the recent boom in AI performance. [8]

# What are large language models?

Large language models are complex ML algorithms built primarily from neural networks designed to interpret and generate human language. [9] Large language models are the algorithms used inside AI chatbots, like ChatGPT, and utilize specialized neural networks called transformers (the "T" in GPT stands for transformer). Large language models require computationally intense training on vast amounts of text data to find patterns in writing, such as what words commonly appear near other words. By identifying these patterns, they can "learn" basic rules of grammar and syntax.

# Does AI possess human intelligence?

No. AI uses algorithms that can identify patterns in data to generate new data. They cannot reason, understand, emote, or feel in ways associated with human intelligence. While some of the language used within the AI field implies a biological process, the algorithms are made of code, run on silicon chips, and do not mimic actual brain functions in any meaningful way. However, analogies to neurological processes or human intelligence can be helpful in understanding how AI algorithms work at a high level.

# What are some drawbacks of AI?

> **Any AI tool is only as good as its training data**

Since the internet contains large quantities of text and images that are biased by race, gender, class, ability status, and more, AI tools like ChatGPT that are trained on this material risk producing biased or offensive outputs. [10] Tools trained on historical data that reflect past biased decision making, such as in areas like housing or healthcare, also have the potential to produce biased outputs. Similarly, AI tools may give inaccurate answers to questions, either because they are trained on inaccurate data, or because they interpreted training data incorrectly. Depending on how the tool works, it may be difficult to assess its accuracy in advance. In addition, entering private or sensitive information into an AI system creates risks related to how software companies use and share customer data. Using an AI tool may expose residents or municipalities to breaches of privacy or confidentiality.

# What are the environmental impacts of AI?

There is an emerging understanding of AI's environmental impacts. This is primarily due to the massive computational power needed to train large AI algorithms. This computational power requires dedicated data centers which consume a lot of energy. According to the International Energy Agency (IEA), data centers used 460TWh in 2022, or around 2% of the global energy consumption. [11] However, this number is expected to double within the next four years and grow exponentially due to the need for more computation for AI. A single ChatGPT query takes nearly ten times more energy than a Google search. [12]  The increase in the number of data centers and their power consumption will increase carbon emissions and strain water resources, as they also require vast amounts of water to cool. [13] These impacts are at odds with most municipalities' sustainability initiatives and have also led to questions of widening environmental disparities among disenfranchised communities.

# How Local Governments Are Using AI Today

## Introduction

AI has the potential to accelerate progress toward many different local government objectives. Some examples include climate resilience, social service management, equitable access to government services, improving infrastructure, traffic management, and economic development. This chapter is intended to provide examples and case studies of some AI applications that cities are currently investigating.

## How to decide to use an AI solution or not

When deciding to implement AI within your local government, there are many questions to consider. How will the software be managed in the long term? Is it safe? What government resources will be needed to support this software? What are the costs? Will it be developed in–house or through a contractor? These questions are unique to every municipality and application. However, there are overarching questions that are important to consider every time. This is why we have provided a checklist for assessing AI tools for local government in Chapter V. We hope you use this checklist as a starting point to help guide you through the various questions surrounding using AI tools.

## AI applications in local government

Below are several examples of AI tools that are being used or proposed in local governments today. The list is not exhaustive but is a jumping–off point for exploring AI applications relevant to your municipality. We encourage you to think about the unique issues facing your municipality to see if an AI solution could be helpful.

# Example #1: AI informative chatbots

Chatbots for government use are increasingly common. According to the Center for Digital Government's 2022 survey, most agencies at the local and state level currently use them or plan to in the near future. [14] However, not all chatbots are built equally. Earlier versions of chatbots were programmed to only answer specific questions that were explicitly given from an FAQ. With the rise of generative AI, new chatbots can interpret a much broader range of questions and answers. These newer chatbots can utilize information specific to your jurisdiction and provide more detailed responses. One example is the city of Buenos Aires's chatbot, which has been in use since 2019. [15] The chatbot, which is integrated into WhatsApp, answers over 5 million questions monthly and has been used by the city to communicate information on topics including social care, vaccinations, and bike sharing. Chatbots can be developed in-house or contracted through a vendor.

# Example #2: Using AI to make government services more accessible

AI has been used to create digital accessibility solutions and improve access to government services. One example is real-time AI audio transcription that can automatically translate to other languages; this is used in San Jose to make city council meetings more accessible. [16] Other AI tools can aid with speech-to-text or image-to-speech conversion and provide resources for people with reading, visual, or cognitive impairments.

# Example #3: AI for traffic management

AI tools have been used to assist with traffic analysis to improve road network efficiency and reduce $CO_2$ emissions. This can include predictive road maintenance, identifying inefficient signal timings, optimizing bus routes, and enforcing parking and speed limits. One example is Google's Green Light pilot program, currently in use in Boston and Seattle, which uses AI to optimize traffic light patterns for automobile throughput. [17] Another large-scale AI traffic project, funded by the U.S. Department of Energy, was completed in Chattanooga, TN, and resulted in a 32% reduction in traffic delays on the targeted route. [18]

Photo credit: Michigan Municipal League

# Example #4: AI for water system management

AI tools have been used to help maintain, manage, and catalog municipal water infrastructure. This includes predicting pipe failures, smart irrigation systems for agriculture, and automated inventory of service lines and their materials. One example is a current commercial AI tool that utilizes geographic information system (GIS) data, historical pipe failure records, and soil conditions to identify pipes at risk of failure or that potentially contain harmful materials like lead. [19] [20] Using AI tools can also aid in identifying and cataloging lead service lines to minimize health risks and meet Lead and Copper Rule Revisions (LCRR) inventorying requirements. These AI tools are increasingly being accepted by federal environmental agencies, including in the state of Michigan. [21] However, it's important to include community engagement with the

use of AI tools to avoid overreliance on the tool, and bias. For example, older homes, whose residents tend to have less financial resources, often have incomplete records that may not be accounted for by the AI tools. These housing divides may also be racially segregated. For example, in 2018, the city of Flint used AI tools to help identify lead pipes to replace, but a lack of transparency from the local government over which homes were prioritized led to mixed feelings in the community about the project. [22] More recent AI lead pipe tool identification implementations in cities such as Toledo, OH, which prioritized community engagement, have been more successful. [23]



AI has been used for lead pipe identification in conjunction with community engagement.
Photo Credit: https://www.greatlakesnow.org/2021/11/check-lead-pipes-home/

# Example #5: AI digital twins

A digital twin is a virtual model of a physical system that can be used to predict the outcomes of different changes. These digital twins can also be updated with real-time data and utilize AI algorithms to improve their predictions. In the case of cities, a digital twin can be created of entire neighborhoods and updated through internet-connected sensors to analyze complex infrastructure interactions. One particularly ambitious digital twin project is in Singapore, where a 3D digital twin of the city was developed to assist in green space planning, flood mitigation, underground utility identification, and wireless tower planning. [24] Detroit also has a digital twin used to visualize new development plans and model infrastructure needs. [25].
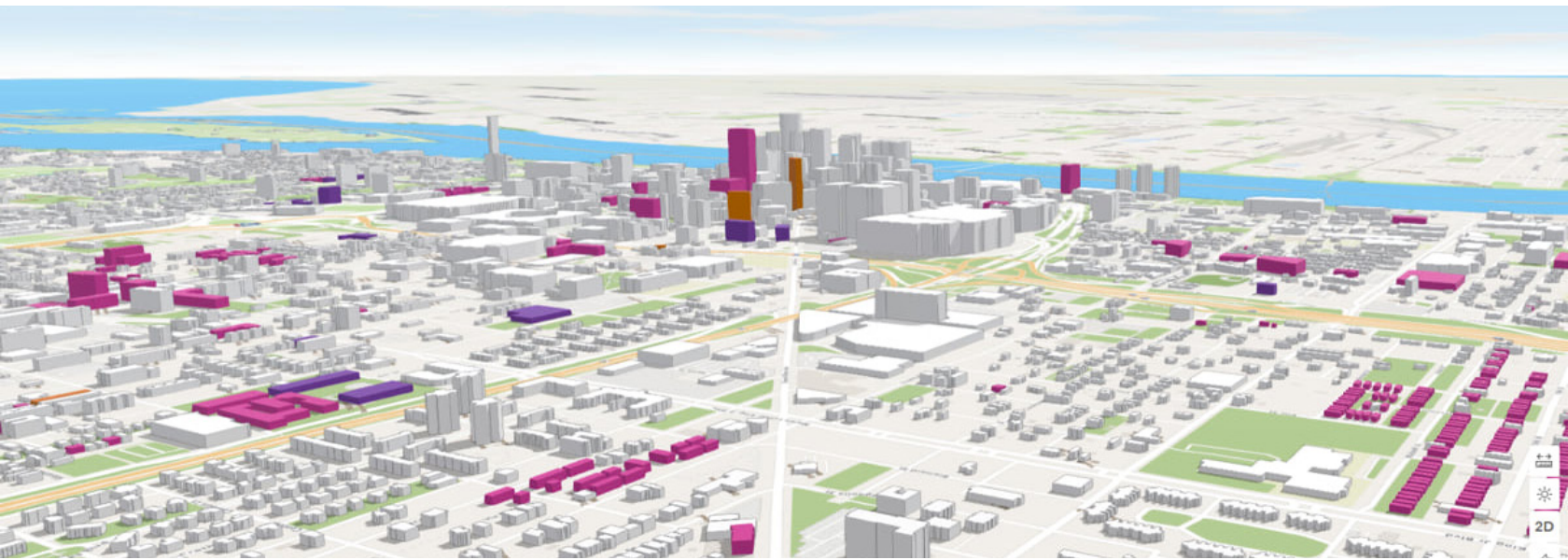
A digital twin of Detroit

Photo credit: https://www.esri.com/about/newsroom/blog/detroit-digital-twin-future-development/?srslt id=AfmBOoo5VGY04XIouIBO2L-XJ-usxwDPRzuK5wW_Uk5mjg7BlPPZwu4e

# Example #6: AI for disaster preparedness and management

AI has been used to aid cities in disaster preparedness and management. This can include risks from heavy winds, tornados, flooding, fires, and power outages. One way AI can assist is by identifying high-risk environmental areas using satellite images. [26] Other solutions have relied on a mix of physical infrastructure sensors and historical data. For example, Virginia Beach has implemented FloodVISION-AI, which employs AI and internet-connected sensors to monitor areas with flood risks and respond more quickly to emergencies. [27]

# Example #7: Using AI to address homelessness and emergency aid

Some cities have experimented with AI to identify households at risk for eviction and quickly get them in contact with available government aid and shelter programs before they become homeless. These programs can serve more families and provide quicker responses to utilize the available assistance. One example is in Los Angeles, where a pilot program has helped connect 800 at-risk families to their Homeless Prevention Unit and Health Services. [28] The AI model was trained on privacy-protected historical databases of information, such as emergency room visits, food stamp applications, and eviction likelihood, to identify at-risk families. The program has prevented over 86 percent of the contacted families from losing their housing.

# AI within law enforcement: a controversial topic

The use of AI in law enforcement has been proposed to enhance efficiency and precision in crime prevention and investigation. However, using AI for law enforcement carries significant controversy and risk. Many different kinds of law enforcement AI systems have been shown to produce unfair outcomes that disproportionately affect marginalized communities. For example, AI facial recognition used in law enforcement software has consistently misidentified Black faces at a higher rate than White faces and exhibited racial profiling biases. [29] AI can deepen existing social inequities and racial discrimination and result in wrongful arrests. In Detroit, Robert Williams was the first innocent person known to be wrongfully arrested based on faulty AI facial recognition. [30] Several other wrongful arrests have followed, causing the city to be sued and subjected to intense scrutiny from the American Civil Liberties Union (ACLU).

Ensuring transparency, accountability, and oversight is crucial to preventing discriminatory practices, upholding civil liberties, and maintaining public trust. Due to the high risk, the use of AI in law enforcement is a complex topic that we cannot adequately cover here. It should be approached with extreme caution and tact. The U.S.

Department of Justice has released a four-part technology brief series that investigates many facets of AI and criminal justice for state and local governments that can serve as a starting point to learn more on this topic. [31] The National Association for the Advancement of Colored People (NAACP) has also released a policy brief on the use of AI in predictive policing. [32]

# AI within the legal system: ethical concerns

AI is increasingly utilized in courtrooms for legal review, legal document automation, predictive legal analysis, and client communications. However, like law enforcement, AI within the legal system is controversial. The complexities of legal reasoning and the nuances of individual cases can lead to errors by AI tools, causing significant injustices and harm. They also may be trained on biased data that can perpetuate social inequalities. The use of AI in any legal capacity should be approached with extreme caution and investigated thoroughly before pursuing. The Department of Justice is expected to release a report addressing the use of AI in the criminal justice system later in 2024. [33] In addition to this report, the interim guidelines on AI released by the National Center for State Courts (NCSC) [34] and The Center for Security and Emerging Technologies (CSET) policy brief on "AI for Judges" [35] can serve as starting points to learn more on this topic.



Photo credit: Michigan Municipal League

# Case study of big potential for AI tools: Grove City, Ohio (Population 41,252)

Adapted from GovTech.com. Original author, Julia Edinger. [36]



Grove City, OH

Photo credit: https://visitgrovecityoh.com/attractions/grove-city-town-center/

**Key takeaways**

- Even relatively simple AI tools can increase efficiency and reduce costs for small and mid-sized municipalities.
- Adopting a city-wide local AI policy is critical to encourage new applications and mitigate risk.
- Making flexible guidelines that can be updated frequently can help cities keep up with AI advancements.

In Grove City, OH, local leaders took governance of AI tools into their own hands to lay the groundwork for new AI applications and safe implementation. On October 3rd, 2023, the city enacted its AI policy to standardize procedures, enhance security, and set consistent and safe rules for AI use for its city officials. They worked with information system teams and city administrators to set up a framework to approve AI-powered tools on a case-by-case basis.  Since then, the city has been using several AI-powered tools, including Grammarly for advanced document review and KnowBe4 for cybersecurity training. They implemented a city chatbot and are feeding almost 1 billion data points a month to the cyber-risk management tool Arctic Wolf. The city's Director of Information Systems has stated that several of these applications would have been difficult for Grove City to handle with its limited staff. However, using AI-powered tools has extended their capabilities and offered cost savings. The city approached establishing AI governance early in a way that was not overly restrictive but did address risk mitigation. The city policies are revised annually and can be updated over time as AI evolves.

# Case study for AI tool failure: unemployment fraud tool MiDAS failure in Michigan

Adapted from the *Detroit Metro Times*. Original author Ryan Felton. [37]



Photo credit: Unemployment Insurance Agency/michigan.gov

**Key takeaways**

- Always have human oversight of the AI tool output.
- Always have a way to get feedback quickly if the AI tool does not work.
- Before deciding to implement an AI tool, always assess the human emotional and financial damage if the tool were to make an error, and do not use it in high-risk cases.



Photo credit: Michigan Municipal League

One of the most high-profile cases of a government AI tool failure comes locally from Michigan. This case, which happened before the current AI boom, involves a software program that fits the definition of an AI tool as it attempts to perform a task requiring human intelligence.

In 2013, the Michigan Unemployment Insurance Agency (UIA) paid a private company to replace its 30-year-old system for screening unemployment claims with a new software program called the Michigan Integrated Data Automated System (MiDAS). This tool was developed using data science techniques similar to AI software used today. Soon after, MiDAS found the number of persons suspected of unemployment fraud was five times higher than before its implementation. The problem was that MiDAS was too rigid in its definition of fraud and automatically assumed guilt while also operating on missing, corrupt, and incomplete data. Many of these cases required nuance to sort through different scenarios, which were instead automatically flagged as fraud. MiDAS ran primarily without any human oversight and flagged any case that strayed even slightly from its standard as fraud.

After many court appeals, class action lawsuits, and internal audits, it was found that from 2013 to 2015, MiDAS misidentified 85 percent of the 40,195 cases it originally cited for fraud. The result was a system that had enormous financial and human costs that are still being litigated in 2024.

# Guidelines on Generative AI for Local Government

## Introduction

While there are many different types of AI applications local officials may encounter, one that warrants special attention is generative AI. Although generative AI is just one example of an AI tool, its popularity, ease of access, and integration with a wide range of different software has made it particularly prominent, thus warranting special attention from local officials. This chapter provides examples, best practices, and guidelines for generative AI use for municipalities.

## How to use these guidelines

This guide can be used as a jumping-off point for cities to develop their own standards around generative AI use. We encourage responsible experimentation to understand the potential of generative AI in order to decide on a case-by-case basis the most appropriate uses. However, an official local use policy should be written and approved by all IT teams, if applicable, before using any new software.

## What is generative AI?

Generative AI is a class of new technologies that produce content based on text or file inputs from the user. They can be accessed as "general purpose" tools through a website, as "widgets" integrated within different software tools, or run in the background in specialized applications, sometimes unbeknownst to the user. In their general purpose form, most generative AI tools are free to use, with an option for a premium monthly subscription. Users usually interact with these tools through a chatbox by writing a question or task called a "prompt." Examples include ChatGPT, Gemini, and Copilot.

Generative AI tools are built by training a sophisticated algorithm called a large language model on a very large volume of data from the internet and other sources. This machine learning algorithm is designed to find patterns within the data to predict what outcome satisfies a given question or "prompt." They are trained not only on text data but also images, code, and videos. They also use the information provided in the prompt by the user to train their algorithm further. The output of these tools is usually text but can also be images, videos, or files. The underlying algorithms used in generative AI tools such as ChatGPT, Gemini, and Copilot may also be integrated "under the hood" of other software. The biggest takeaway to remember is that Generative AI is a tool, and you are responsible for the outcomes of your tools. This is the same if autocorrect alters the meaning of your text; you are still responsible for the final content. The technology is in service to your work. It does not excuse your judgment or accountability.

**The biggest takeaway to remember is that Generative AI is a tool, and you are responsible for the outcomes of your tools. This is the same if autocorrect alters the meaning of your text; you are still responsible for the final content. The technology is in service to your work. It does not excuse your judgment or accountability.**

# Overarching guidelines

- Fact-check and review all content generated by AI.
- Treat all content generated by AI as a first draft, not a finished product.
- Be transparent when content has been generated by AI.
  - "Parts of this document were drafted by GPT 4 and reviewed by the author. The author takes full responsibility for the content of this document."
  - "Some segments of this report were assisted by GPT 4 and reviewed, researched, and fact-checked by the author before publication."
- Do not share sensitive or confidential information in the prompts or queries.

# What is sensitive or confidential information?

Government information is subject to federal and local data compliance standards. Data used by AI tools must also adhere to data compliance regulations. Important standards include, but are not limited to:
- The Health Insurance Portability and Accountability Act (HIPAA) [40]
- Criminal Justice Information Services (CJIS) [41]
- Payment Card Industry Data Security Standard (PCI) [42]
- Federal Information Security Management Act (FISMA) [43]

In short, do not use any data related to health, criminal, legal, payment, or personal information without approval from IT data wcompliance specialists.

# Getting started

For clarity, we will assume the use of ChatGPT for this guide. However, we encourage you to experiment with other generative AI tools, such as Gemini or Copilot, to see which one you prefer.

Open up a web browser to access ChatGPT, and make a free account to operate the tool. We encourage you to do this to access the most up-to-date version.

# Use case #1: Drafting documents

Generative AI can effectively write first drafts of different styles of documents.

- **Drafting a job description:** ChatGPT can aggregate similar jobs to provide a good generalized description. For example, try:

*Write a 250 word job description for a Chief Information Officer of a medium-sized village of 10,000 people.*

- **Drafting a news announcement template:** Rather than starting from scratch, ChatGPT can generate writing templates that can help you get started faster. For example, try:

*Write a one page template for a news announcement on a new city initiative.*

- **Drafting a persuasive argument:** In government, sometimes we have to argue why a particular policy should be adopted or a decision made. ChatGPT can help generate persuasive arguments and provide counterarguments to understand issues from different perspectives. For example, try:

*Provide me with arguments both for and against using generative AI for local governments.*
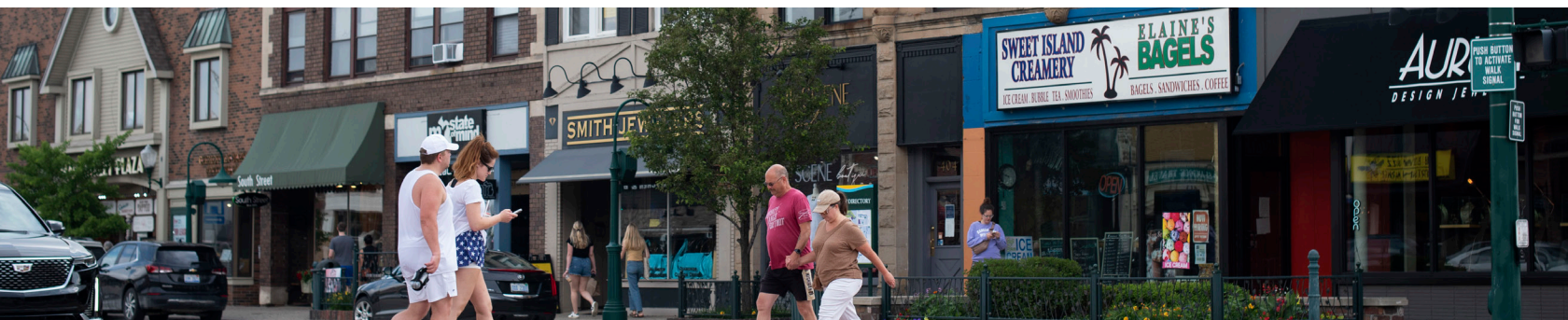


Photo credit: Michigan Municipal League

## How it works

ChatGPT utilizes its large amount of training data for examples similar to the type of document you are asking about, identifying what words and phrases most frequently appear near your words, and aggregating them into a generalized, average response.

**Best practices**

**Do:**

- Do always proofread and fact-check the draft for word choice and appropriate language. Regardless of how the content was authored, you will bear the responsibility for its use.
- Do think about potential unintentional biases in word choice or arguments that may be present in the tool response.
- Do think about the scale of risk posed if the text is inaccurate and is read by someone else without being corrected.
- Do try to be specific in the prompt. Providing more context will give a more relevant answer.
- Do disclose that the document was assisted by an AI tool.

**Don't:**

- Don't enter confidential information about yourself or others in the prompt.
- Don't copy and paste the generated text. We recommend re-typing any text yourself rather than copying and pasting it into your next document. This can aid in proofreading the content, ensure appropriate word choice, and help to avoid including irrelevant or incorrect information.



Photo credit: Michigan Municipal League

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# Use case #2: Summarizing documents

ChatGPT can be effective at summarizing large volumes of information. For example, you can use it to summarize meeting notes into bulleted lists. First, ask the tool what you want it to do:

*Can you create a bulleted list of action items from these meeting notes?*

Then in the next prompt, paste the meeting notes into the tool. Do not paste confidential or sensitive information into the prompt.

> **Do not paste confidential or sensitive information into the prompt.**

## How it works

ChatGPT uses the context of your previous prompts to inform its next answer. In this case, it "remembers" from your first prompt to expect meeting notes as its next input. However, this can also cause the tool to overestimate the importance of previous inputs, giving false results. It's best to start a new chat for every new topic in the tool. This is done by clicking the "New Chat" button on the left side of most tools.

## Best practices

**Do:**

- Do try different types of text documents to summarize. Some tools can analyze uploaded pdf or other files directly, often through paid add-ons.
- Do try to summarize a document you've written yourself to see if you agree with its response.
- Do think about the scale of risk if the response is inaccurate.
- Do think about potential unintentional biases that may be present in the response.
- Do disclose that the document was assisted by an AI tool.

**Don't**

- Don't paste confidential or sensitive information into the prompt.
- Don't summarize emotional text or data, such as public feedback surveys, in which important human context might be lost through summary.
- Don't summarize notes that are written in shorthand. The tool may not interpret the text correctly.
- Don't summarize safety or legal documents; the risk of an error is too high.
- Don't make big decisions based on summarized information.

# Use case #3: Explaining complex topics in plain English

ChatGPT can be helpful in explaining complex government topics in ways that are easier to understand. This can be used to better communicate with your constituents. For example, try:

> *Can you explain to an elementary school student how the U.S. Congress works?*

> *Can you explain the steps to apply for Medicare for someone who is not internet savvy?*

> *Can you rewrite my paragraph to be more clearly understood by a layperson?*

## How it works

ChatGPT tries to predict what tone of response you want based on your prompt. By default, ChatGPT has a formal or neutral tone. When you specify a different tone, it changes your result by using words or phrases from text it was trained on with a similar tone.

## Best practices

**Do:**

- Do try explaining a concept you are familiar with at different levels of complexity and verifying the results.
- Do always proofread and fact-check the content. Regardless of how the content was authored, you will bear the responsibility for its use.

- Do think about the scale of risk if the response is inaccurate.
- Do think about potential unintentional biases that may be present in the response.
- Do disclose that the text was assisted by an AI tool.

**Don't**
- Don't paste confidential or sensitive information into the prompt.
- Don't copy and paste the generated text. We recommend re-typing any text yourself rather than copying and pasting it into your next document. Treat the generated text as a first draft.

# Use case #4: Coding (Excel, HTML, Python, COBOL, and more)

ChatGPT can produce code snippets in multiple languages that can speed up and assist programmers and IT teams. It can also be used to migrate legacy code into more modern languages. For example, try:

> *Write an Excel equation that averages the data in 5 columns and saves the largest value.*

> *Write HTML code to generate a user feedback textbox that can be submitted.*

> *Write code in Python that graphs values from a table in a PDF document.*

> *Translate this legacy code snippet from COBOL to Java.*

## How it works

In addition to text data, ChatGPT is trained on large coding datasets and can predict the most likely code that will work based on patterns in its training data.

## Best practices

**Do:**
- Do be specific and narrow in your coding question. Factor your problem into several small steps. This will produce code that works, is more efficient, and is understandable.

- Do proofread, understand, test, and validate the code generated before deploying.
- Do think about the scale of risk if the code breaks or does not work as intended.
- Do think of potential security vulnerabilities of generated code.
- Do disclose that the code was assisted by an AI tool.
- Do adhere to department code formatting standards.

**Don't**
- Don't paste confidential or sensitive information into the prompt. This includes passwords, confidential keys, and email addresses.
- Don't deploy generated code that needs to be secure or handles sensitive data.
- Don't deploy generated code without understanding how it works and reading the relevant documentation of the functions used.
- Don't request overly complex or long code segments. Not only is the code unlikely to work, but it can also be less efficient or not easily traceable.

# Use case #5: Translating documents to different languages

ChatGPT can help you draft communications in other languages. For example, try:

> *Write an alert that Main Street will be closed from October 1st to October 14th in both English and Spanish.*

> *Translate my paragraph into both Arabic and Mandarin.*

> *Identify this language, and translate it into English.*

## How it works

Different AI models are trained not only in English text but other languages as well. However, the exact number of languages supported or the extent of the data these models are trained on is not well documented.

**Best practices**

**Do:**
- Do translate simple and straightforward text.
- Do proofread the translated text with someone proficient in the language.
- Do think about potential biases that may be present in the response.
- Do think about the degree of risk if the translation is inaccurate.
- Do disclose that the translation was assisted by an AI tool.

**Don't:**
- Don't translate sensitive or controversial text that requires considerations of tone and word choice.
- Don't copy and paste translated text you do not understand before consulting someone with proficiency in the language. You are responsible for the content of the converted text for accuracy and bias.
- Don't assume the text will be easily understood by all speakers of different regional dialects. You can try to get more accurate translations by specifying a regional dialect in the prompt.

# Use case #6: Asking for information on a topic (be careful)

A useful but higher-risk application is asking ChatGPT questions to learn about a topic.

> **AI tools are known to confidently give false facts on topics without providing sources. This is sometimes called a "hallucination" but is more accurately called "being wrong."**

AI tools are known to confidently give false facts on topics without providing sources. This is sometimes called a "hallucination" but is more accurately called "being wrong." One way to get a feel for this behavior is to ask the tool to give you facts on topics you already know a lot about. For example, try:

*Who were the last 3 mayors of [my city]?*

*Who were the last 3 village managers of [my village]?*

*Who is currently on the city council of [my city]?*

When giving this response for a medium-sized city in Michigan, the AI tool was wrong, listing the last two mayors correctly, but incorrectly listing a failed candidate as the third mayor. When asking about a smaller village in Michigan, all the responses were wrong.

A better approach is to only ask the tool a single simple question that is easily fact-checkable and does not rely on recent news. In addition, you should always ask the tool to provide a source to verify the accuracy of its information, and follow up to check that the source provided is also trustworthy and exists. For example, try:

*What is the state flower of Michigan? Please provide a source.*

## How it works

ChatGPT tries to predict what words and phrases most frequently appear near similar words and phrases in your question, using its large database of internet text. This can lead to the creation of false facts. For example, the phrase "1+1=" may appear frequently next to "3," even though this is incorrect.

## Best practices

**Do:**
- Do ask single, simple questions that can be easily fact-checked.
- Do ask the tool to provide a source.
- Do always fact-check responses.
- Do think about potential biases that may be present in the response.
- Do think about the degree of risk if the response is inaccurate.

**Don't:**
- Don't enter confidential information about yourself or others in the prompt.
- Don't trust responses without fact-checking, regardless of how confident the tool sounds.
- Don't ask questions that rely on current events, as the models are often not trained on up-to-date information.

# Use case #7: Generating images (not recommended)

New Generative AI can produce realistic or stylized images based on prompts. As of 2024, these features are **too risky and not recommended** for use in an official capacity by local officials.

## How it works

Generative AI tools can be trained on large image databases, learn patterns from the images, and use those patterns to generate new images. For example, it can "learn" that most STOP signs are red or that images of boats usually accompany images of water. However, it can also identify incorrect and problematic patterns that negatively reinforce existing stereotypes or imply false causation. These tools are also trained on copyrighted pictures and artwork, which has sparked legal debate.

## Concerns

1. Users may not know the image they are seeing is fake, which can cause an increased ability to deceive. Highly realistic fake images, called "Deep Fakes," have been a source of legal and ethical concern. While legal regulations on "Deep Fakes" are in their early stages, the risk of deceiving, intentionally or not, with AI generated images is very high.
2. Even if the images generated are unlikely to be controversial, there is an ongoing debate on the copyright legality of the images generated by AI. This is because many tools were trained on images and artwork that are copyrighted and used without the owner's consent.
3. As of 2024, Generative AI has not been trained on sufficiently diverse image sets that appropriately represent ethnic, racial, and gender groups. Generated images are at a higher risk of being biased, offensive, and harmful.

As these technologies may change, it is recommended to keep up to date on recent developments and re-assess AI generated image use in the future.

# Use case #8: Generating audio and video (not recommended)

New Generative AI can produce realistic or stylized audio and video based on prompts. As of 2024, these features are **too risky and not recommended** for use in an official capacity by local officials. These are for the same reasons listed for generated images.



Photo credit: Michigan Municipal League

# Checklist for Assessing AI Tools for Local Government
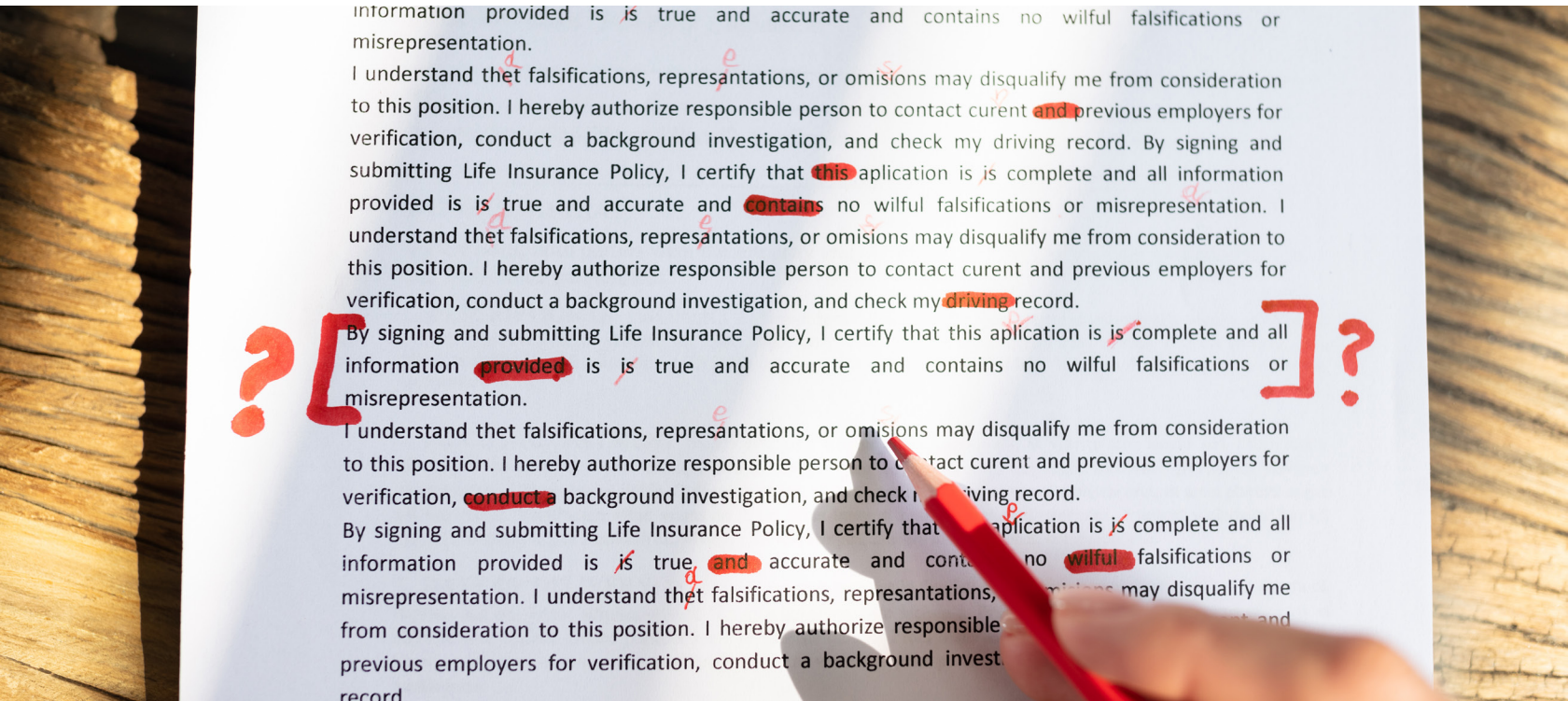


Close-up Of A Person's Hand Marking Error With Red Marker On Document.
Photo credit: www.istockphoto.com/AndreyPopov

## Introduction

This chapter provides an actionable checklist for government officials to evaluate AI tools. It emphasizes a risk-based approach to guide decision-makers through the layers of potential risks associated with AI tool implementations. This checklist can help individuals or teams identify when risks might be too high or when they might be deemed acceptable. It is intended to be a starting point for teams to consider AI tools and should be used to facilitate discussions to inform their decisions.

The checklist is designed for AI applications that exist today but are built on ethical and safety principles that will remain relevant as AI applications advance. [45] We encourage walking through this checklist for small AI tools that you might implement yourself and large AI tools that are procured through a vendor or contractor.

# Overarching principles

1. The use of AI should support our work to deliver better, safer, more efficient, and equitable services to our residents.
2. Everything we do, regardless of the tools, is a reflection of ourselves. We have a responsibility not to discriminate based on race, ethnicity, sex, religion, age, disability, veteran status, or other classifications. This responsibility extends to our use of AI.
3. Every tool that we use has an impact on the security, privacy, and digital rights of our constituents.
4. We will properly disclose and be transparent to the public about our use of AI tools and their impacts.
5. We embrace a culture of responsible experimentation where we maintain control and understanding of the use of new tools in service to our residents.



Photo credit: Michigan Municipal League

# A risk-based framework

New global regulations, such as the EU AI Act and U.S. Executive Order on Safe and Effective AI, are coalescing on a risk-based framework. [46] This means classifying a potential AI application as **low risk, medium risk, high risk, or unacceptable risk.**

| Risk Tier | Example AI Systems | Implementation Considerations |
|---|---|---|
| Unacceptable risk | Real-time AI-assisted surveillance in public spaces; AI-generated video or images | AI tools that have a very high potential for physical, emotional, or financial damage and pose legal or ethical questions should not be used. |
| High Risk | Health, safety, education, transportation, employment, and law enforcement applications | Transparent to the user, appropriate human oversight, be properly documented, have proper feedback mechanisms, and be periodically assessed by a human to ensure correct operation |
| Medium Risk | AI Chatbots | Transparent to the user and have appropriate precautions and human oversight |
| Low Risk | AI Spelling and Grammar Assistant | Overall safe to use, few considerations |

# Checklist for assessing AI tools for local government

We encourage you to follow this checklist yourself, or with a team, when assessing AI tools.

**1) Scope and functionality**

    Functionality: What are the inputs and outputs of the AI tool?

    Scope: What is the appropriate scope and potential limitation of the tool's capabilities?

    Traceability: Can the AI tool's decision-making be explained easily?

**2) Ethical considerations**

    Transparency: Does the AI tool disclose its capabilities, limitations, and its use of data to users?

    Failure Risk: What are the human emotional and financial risks if the AI tool does not work as expected?

    Algorithmic Discrimination: Are there potential discriminatory outcomes based on race, ethnicity, sex, religion, age, disability, veteran status, or other classifications protected by law?

**3) Data handling**

    Training Data Quality: Is the data used to train the tool accurate, complete, and representative?

    Data Privacy: Is the data used and retained by the AI tool secure, and does the company adhere to data privacy regulations?

**4) Legal considerations**

    Regulatory Compliance: Is the AI tool compliant with local laws and IT data regulations?

    Intellectual Property: Is the tool trained on data that is protected by intellectual property laws?

## 5) Human oversight

Human Validation: Does the AI tool ensure mechanisms for human oversight of its function?

Quick Feedback: Does the AI tool allow users to identify problems and report feedback?

Failsafe: Is there an appropriate human fallback if the tool fails?

## 6) Performance monitoring

Performance Metrics: What are the concrete metrics to evaluate the tool's effectiveness?

Continuous Monitoring: What is the plan to periodically review the AI tool?

## 7) Documentation

Documentation: What is the plan to document the performance and use of the tool throughout its lifetime?

Incident Reporting: What is the process for recording and reporting incidents to the developers and the person or team responsible for the AI tool?

## 8) Training

Proficiency: Is there proper training for workers to interact with the AI tool safely and effectively?

Awareness: Are users adequately educated on the risks associated with the AI tool?

## 9) End-of-Life

Decommission: Is there a plan for safely decommissioning the AI tool in the future?

Data Retention: Is there a policy for data retention, archiving, or deletion?

## 10) Final risk assessment

Based on the responses from the checklist, quantify the risk of the AI tool as low, medium, high, or unacceptable risk. Use this to guide your decisions on whether to use the tool or not and the appropriate implementation strategy.

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