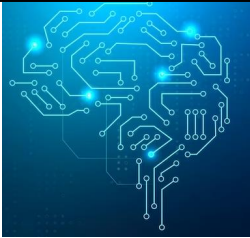
 **RUTGERS-NEW BRUNSWICK**
Edward J. Bloustein School
of Planning and Public Policy



Understanding AI in County and Local Government

New Jersey Association of Counties
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1

~~Note on~~ **This presentation started with AI Generated Content**

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2

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2

Introduction to AI

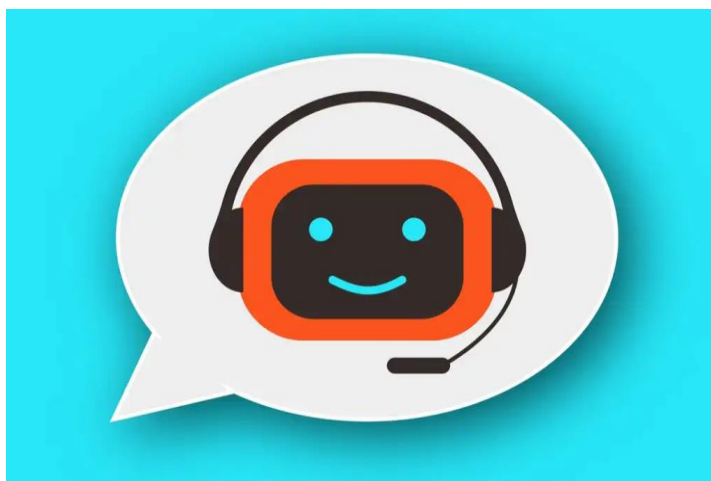
- **What AI does:**
 - Automates tasks and decisions typically requiring human intelligence (image recognition, analytics, predictions, etc.)
 - Identifies patterns and extracts insights from data at scale
 - Continuously learns and improves over time as it processes more data
- **Key AI Technology includes:**
 - *Machine learning*
 - *Natural language processing*
 - *Robotics*
 - *Image (still and video) creation*
 - *Computer vision*

All of which enable computing devices machines to perceive their environment, learn from data, and make autonomous decisions.
- **Importance in Government:** automate routine tasks, gain insights from data, enhance decision-making, and improve citizen services, which theoretically, ultimately leads to more efficient and effective governance.

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What's All the Hubbub About Chatbots?



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About Chatbots

- **What it does**
 - Provides automated conversational experiences
 - Completes simple tasks like looking up data and more complex ones like translating languages, including writing computer code
 - Responds to user input and queries via “prompts” describing what the user wants to know or tells the bot to do.
- **How it works**
 - Built using rules, decision trees and/or AI techniques
 - Processes and analyzes user input
 - Generates relevant responses based on its programming
- **What it "knows"**
 - Information, rules, decision logic provided by developers
 - Data and conversation patterns learned from users
 - Only what has been manually programmed or exposed through training

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In Sum...

- Chatbots provide conversational interfaces powered by rules and AI
- They process user input to respond appropriately based on programming
- Their knowledge comes from developer coding (training) and oning conversations with users
- Commercial chatbots (e.g., ChatGPT, Claude, CoPilot, Gemini) have been trained on as much internet as is publicly available (that’s lot of pages)
- It does inherently differentiate between “good” or reliable information vs. that which is not. Programming is required to do that.
- Answers to questions are based on understanding the question (natural language skills), then *predicting the words that answer the question based on what it has learned.*
- Its programmers train and “teach” it how to respond.
- It learns constantly. Along with applications that can create art and graphics and videos, chatbots are the most popular commercial AI’s. But touch only a small slice of what AI can do.

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6

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Pros and Cons of AI

- **Pros** - Personalization, automation, labor savings, new capabilities
- **Cons** - Bias, unfair or inappropriate outcomes, job displacement, **anti-social uses**, lack of transparency, accessibility challenges. **Chatbots can be wrong and “hallucinate” data in responses to queries because it “sounds correct.”**
- **Chatbot output should be considered as “rough drafts” and require content review and validation of references.**
- **Requires balancing benefits while managing risks through governance and oversight.**

7

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AI Applications in Government

- **Streamline operations** – chatbots for citizen services, process automation, predictive analytics, **use of “robotic processes.”** Can free up human resources for higher-value activities and reduce operational costs.
- **Citizen services enhancement:** writing personalized interactions, streamlining service delivery, and enabling efficient communication between citizens and government agencies (**includes drafting letters, press releases, etc.**).
- **Support decision making** - analytics and simulations for resource allocation, policies,
- **Environmental management/IoT:** processing, analysis, and decisions based on Internet of Things sensors
- **Community development** - computer vision for infrastructure monitoring, language services, “digital twins” to model changes in infrastructure or conditions

8

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Ethical AI Practices

- **Bias Mitigation:** bias mitigation involves identifying and addressing algorithmic biases to ensure fair and equitable outcomes in decision-making processes.

9

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9

Ethical AI Practices

- **Bias Mitigation:** bias mitigation involves identifying and addressing algorithmic biases to ensure fair and equitable outcomes in decision-making processes.

(Wikipedia)

Algorithmic bias describes systematic and repeatable errors in a computer system that create "unfair" outcomes, such as "privileging" one category over another in ways different from the intended function of the algorithm.

10

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Ethical AI Practices

- **Bias Mitigation:** bias mitigation involves identifying and addressing algorithmic biases to ensure fair and equitable outcomes in decision-making processes.
- **Transparency:** involves making AI processes and decisions understandable and accountable, enabling users to trust and understand AI-driven systems.
- **Privacy Protection:** prioritize the protection of personal data and privacy, implementing data governance and security measures to safeguard sensitive information.
- Assess impact of the digital divide on access to online services
- These practices also affect government policy decisions.

11

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Security and Compliance

- **Cybersecurity Measures** to protect against cyber threats, data breaches, and unauthorized access to sensitive government information.
 - This addresses how governments use AI; it does not include the reality of bad actors currently using AI apps to create cybersecurity threats.
- **Legal Compliance** with relevant laws, regulations, and standards, ensuring legal adherence and ethical use of AI technologies.
 - Laws concerning use of AI have yet to evolve. It is a major point of discussion in Congress and state houses. In state houses particularly the absence of federal regulation.

12

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Security and Compliance (2)

- **Data Protection:** prioritize it, implement encryption, access controls, and secure data storage to safeguard government data and citizen information.
 - This is a critical dimension and no different from using any tech application on your own system or coming from or stored in the cloud.
- **Policy analysis:** Consider the impact on the public and use of data.
 - Consider the impact of potential surveillance practices on the public, and the need to manage data. Climate policies can also be affected by data collected by sensors and evaluated by AI applications.
 - Set policies on how staff can use AI applications to prevent data leakage and unevaluated responses.

13

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Budget Considerations

- **Costs of Implementation:** encompass technology infrastructure, software development, training, and ongoing maintenance, requiring thorough budget planning and financial management.
- **ROI Analysis:** Return on investment (ROI) for AI implementations involves assessing the financial, operational, and strategic benefits against the implementation costs and risks.
- **Resource Allocation:** allocating funds, workforce, and technology resources to ensure the successful implementation and operation of AI solutions within government agencies.

14

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AI Implementation Strategies

- **Planning:** requires including defining objectives, assessing resource requirements, establishing clear timelines and milestones, and pre- and post- implementation training of the system. *AI just doesn't happen!*
- **Integration with Existing Systems:** entails compatibility assessments, data integration, and the development of interoperable AI solutions to ensure seamless integration and operation. *Ongoing operations require monitoring and retraining of the system when necessary.*
- **Training and Skill Development:** encompasses technical training, change management, and the cultivation of an AI and innovation focused workforce.

This is about introducing innovation in government. There are approaches to that.

15

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So, What Should I Do Next?

- **You don't have to do anything:** You can monitor and look for opportunities. But it helps to be prepared.
- **Identify where you are now.** Do you have any tech that uses AI? If so, are there any policy implications to consider? Understand it's not going away and it will have an impact on your agency, eventually.
- **Do your diligence!** Review the government tech literature; identify low hanging fruit and what it will take to pick it; talk to vendors; let your employees experiment but have rules concerning what it is used for.
- **For apps you try:** start small-pilot projects, understand their limits and reliability and work with it accordingly; find out what others are doing; set reasonable use policies via a web search or asking a chatbot for a rough draft of what you think you want.
- **Be thoughtful!** Don't rush to be first. Unless you can manage being first, let others lead. It's usually better to get it right the first time.
- Have your Tech Leaders talk to other county tech leaders. **NETWORK! Join GMIS.org**

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16

16

What Not to Do

- Rush into it/get sold by vendors that it's magic. It's not. Deploying it takes effort, not just words.
- Ignore lessons learned by others. Do that diligence thing.
- Allow its use without setting "appropriate use" policies. Talk to your staff about its use. Assign someone responsibility for it.

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17


17

Some Resources


- About AI – it's all new. Read up on tech literature and publications.
 - "Marketplace Tech" is a great NPR podcast covering how tech affect everything. Available on all podcast platforms.
 - Most government interest groups and professional organizations are starting to get their arms around it.
- About Innovation:
 - <http://Innovate-Us.org>: Free innovation and problem-solving training created for and by public servants.
 - <https://Apolitical.co>: Build the knowledge, skills, and connections you need to succeed in the public service
 - Training of supervisors and managers: Rutgers Certified Public Manager program (<https://go.rutgers.edu/NJCPM>) and Center for Excellence in Local Government (<https://celg.rutgers.edu/>).
- Tech Fitness for Local Elected Officials and Administrators:
 - https://go.rutgers.edu/Tech_Fitness

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18



The Beginning?



Questions?

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