

Local Government **REIMAGINED CONFERENCE**

JUNE 5-7, 2024 PALM DESERT, CALIFORNIA

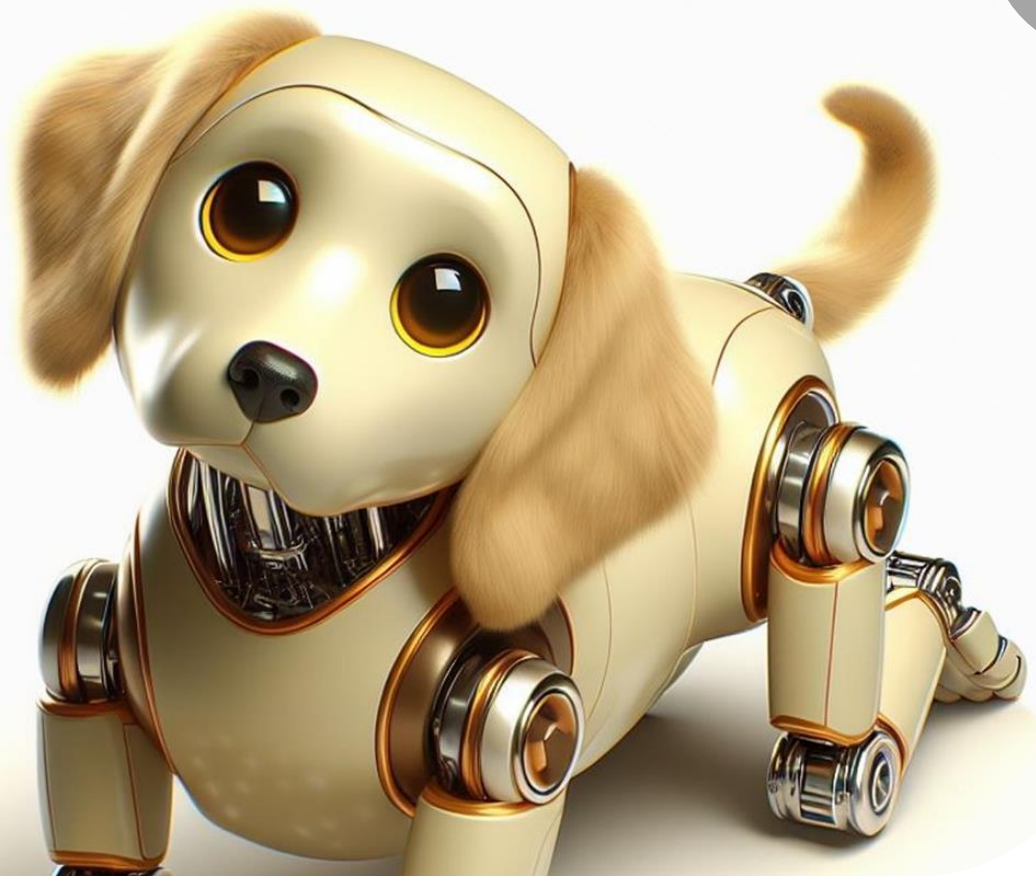
AI: More Friend than Foe

Jennifer Robinson, SAS Global Public Sector Strategic Advisor

ICMA | conference

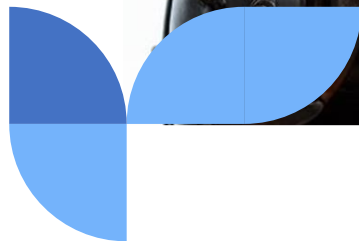
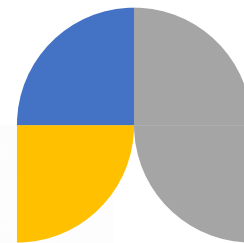
Agenda

- 1 Artificial Intelligence
- 2 Generative AI
- 3 FAQs



Agenda

- 1 Artificial Intelligence
- 2 Generative AI
- 3 FAQs



How we got to where we are today....

Mathematics

Statistics

Machine Learning

Neural Networks

Deep Learning

Generative AI

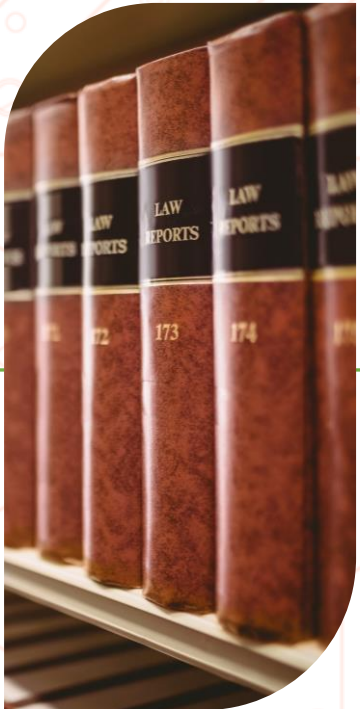
Next Gen of AI

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...and where we are going in the future



Simulation



Prevention



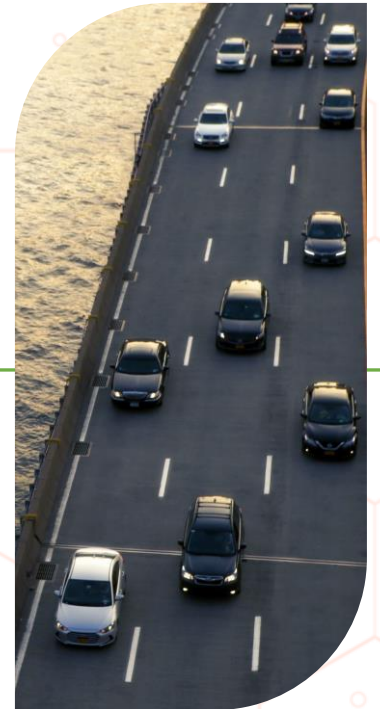
Preparation



Detection

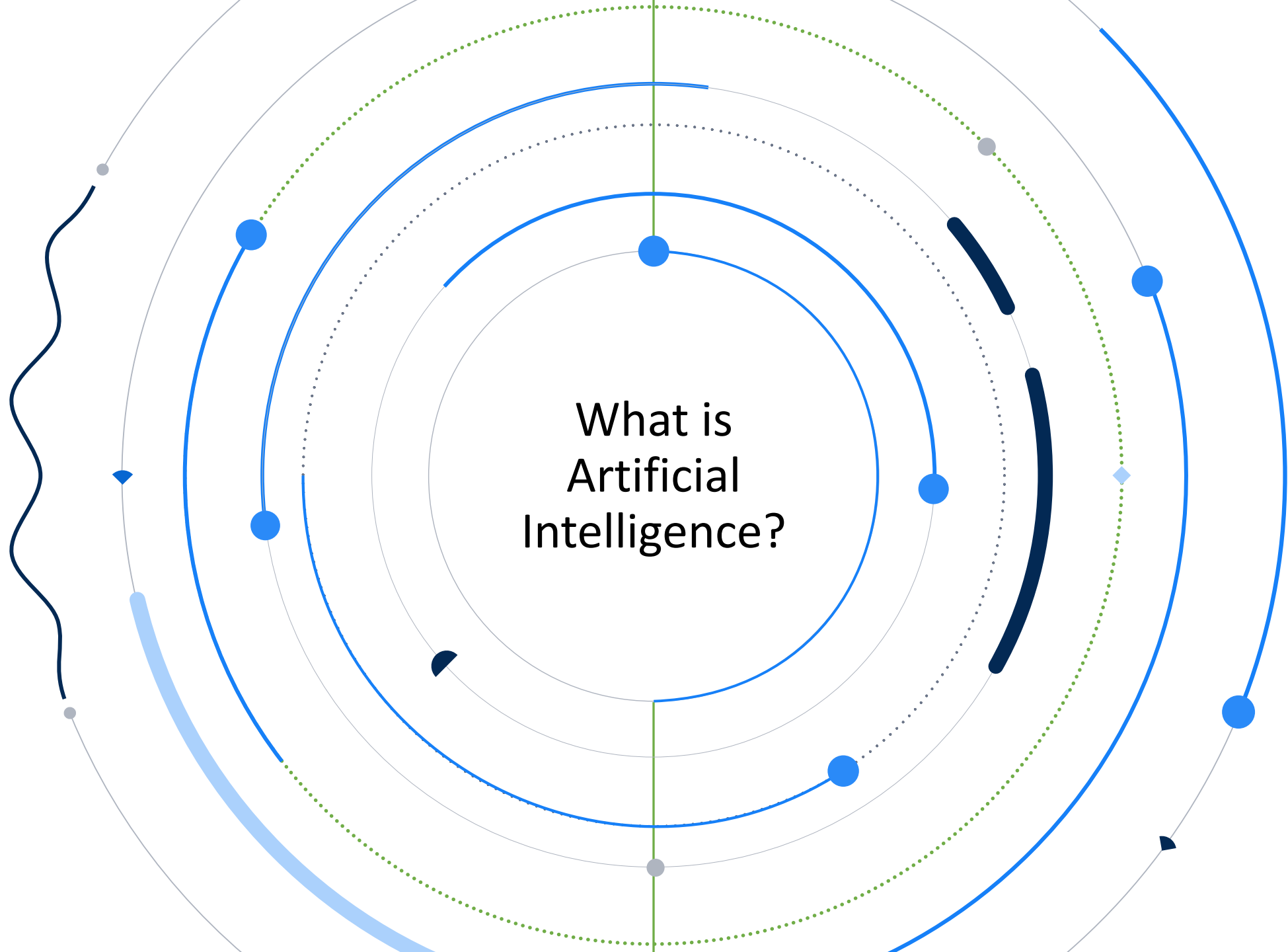


Engagement



Management

What is
Artificial
Intelligence?



The image features a central yellow circle containing the text 'AI' and a definition. This central circle is surrounded by several concentric circles: a solid blue circle, a thin grey circle, and a dotted blue circle. The background is white with various decorative elements including a thick dark blue curved line on the left, a thin blue curved line on the right, and several small blue circles and a square placed at different points along the concentric circles. A green dotted line also curves around the right side of the composition.

AI

Science of designing computer systems to support and accelerate human decisions and actions.



AI

Computer
Vision

Machine Learning

Natural
Language
Processing

AI

Machine Learning

Computer
Vision

Deep Learning

Natural
Language
Processing

AI

Machine Learning

Deep Learning

Computer
Vision

Generative AI
“GenAI”

Natural
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LLM

Natural
Language
Processing

Synthetic Data

Digital Twins

AI

Machine Learning

Computer
Vision

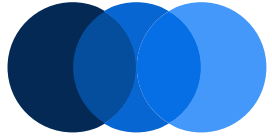
Deep Learning

Natural
Language
Processing

Machine Learning

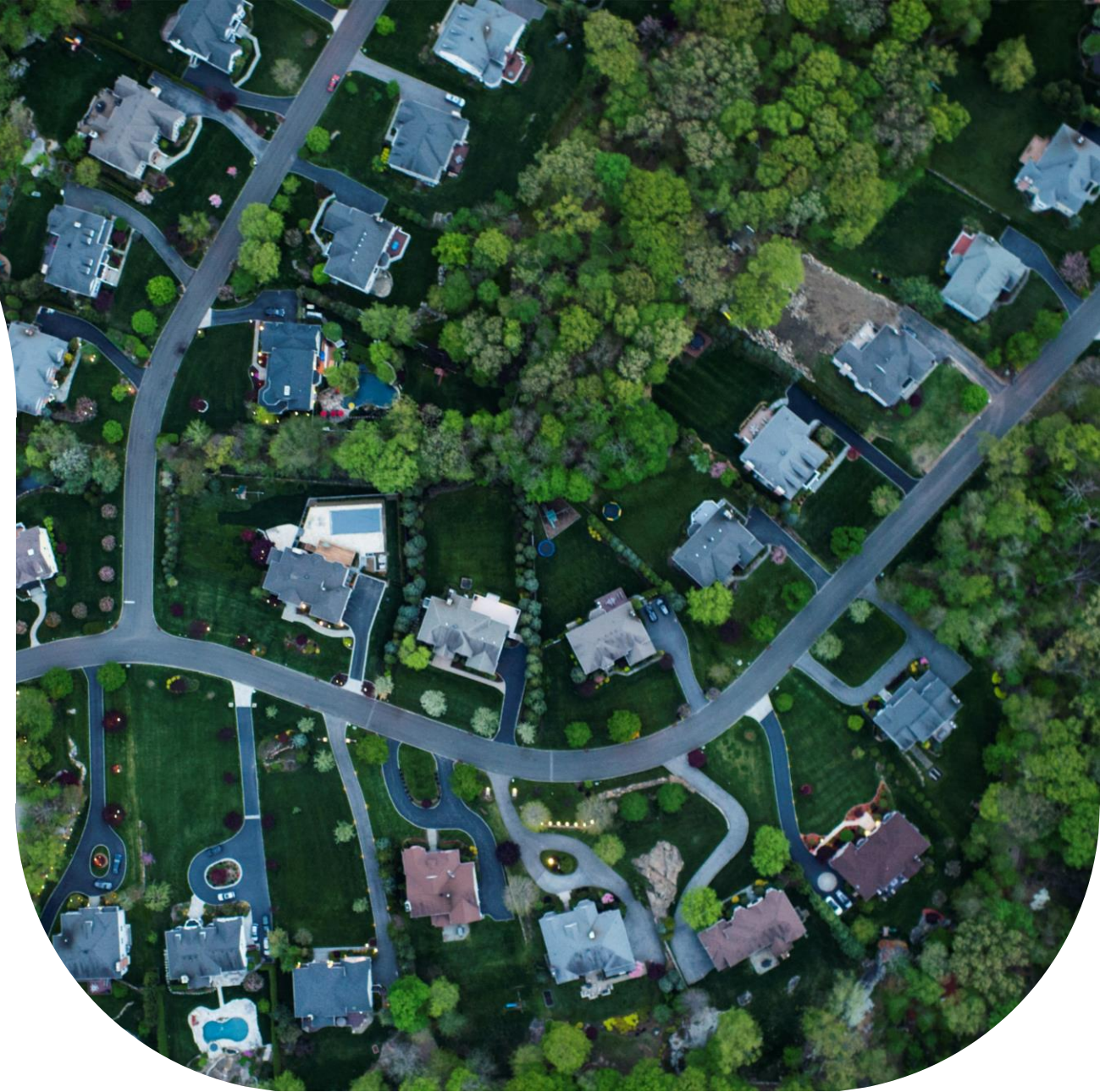
Systems learn from data, identify patterns, and make decisions with minimal human intervention

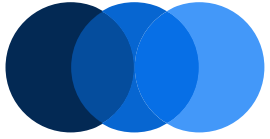




Property Valuation

Counties are using Machine Learning (ML) to reassess every residential property in the community every night.

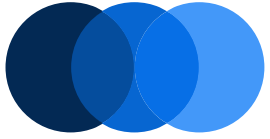




Investigations Management

Law enforcement agencies use Machine Learning (ML) to pinpoint offenders, identify criminal patterns and trends, and issue alerts about emerging threats.





Transportation

Cities are using Machine Learning (ML) to understand commutes and predict traffic in real time.



Natural Language Processing

Enables understanding,
interaction and communication
between humans and machines.



Natural Language Processing

Memorandum of Interview

Date: January 18, 2018
Time: 10:00am

Location: 32 Wright Street Westport CT 68801

Subject interviewed: Bobby Axelrod DOB: 5/25/1977; Ht 6'3" Wt: 178 DL# MD-87623450 SSN: 412-88-2346
Case Number: 123456789

Address: 32 Wright Street Westport CT 68801

Interviewed by: Steve Serrao, SA Jeffrey Cooper

Bobby Axelrod stated that he met Frank Valentine in late May 2017 after being introduced at a social function sponsored by his bank. Bobby is the Executive Loan Officer for Axe Capital which is located at 32 Wright Street Westport CT 68801. Bobby doesn't recall who made the introduction, but he thought it may have been the Senior VP of the Bank, Orrin Bach. He remembers that Frank was introduced as a wealthy land developer from New York.

Bobby stated that after having drinks, Frank mentioned some of his past land deals totaling more than \$200 million. Frank stated he developed Cold Springs Golf Course in Myrtle Beach, SC for \$60 million and Deer Park Hotel and Resort for \$80 million. Deer Park is in Miami, Florida. The other \$60 million were small real estate deals. During this conversation, Frank mentioned that Tom could make a lot more money working with the "right land developer" and maybe double his salary off the books if the "right loans" were approved. Frank gave Tom his business card and wrote his personal cell phone number on the back with instruction to call the personal cell if he wanted to do "business". Frank's personal cell number is 555-345-1212. Bobby stated that he called Frank a week later and made arrangements to meet at Frank's house located at 10126 East River Parkway Long Island NY. Bobby noted that Frank's house was valued at \$5 million and that there were 2 Bentleys parked in the garage. Frank told Bobby that he was a money manager for a major drug cartel. All of the projects included a portion of laundered drug money. Frank stated that he would pay Bobby a fixed rate of \$115,000 to approve 2 loans totaling \$100 million. Tom was advised not to question collateral used to back up the loans. Frank gave Bobby \$15,000 in cash advance payment. Frank told Bobby to split up the cash into 2 transactions so as to not trigger suspicion by the bank or reporting requirements. Bobby told Frank that he knew all about the bank rules. Frank explained that he had established 2 straw companies that were going to take out the loans. One of the entities was a church. Frank explained that the IRS doesn't audit churches and that the other entities had several layers, so finding the actual owners of the companies was next to impossible.

Peyote Spiritual Church 911 East 7th St Dover Delaware 19720 EIN 987654324

Trust Me Land Development 411 Waverly Place Smyrna Delaware 19720 EIN 987654324

On June 1, 2017, Bobby made 2 cash deposits of \$7,500 into his personal savings account at Chase Bank. The deposits were made at the Farm Market branch located at 1234 Taylor Lane.

Narrative

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Label	Type	↓	↻	Com!
Ashley Foster	Person			
412-88-2346	Identifier			
987654324	Identifier			
32 Wright Street Westport C...				
Bobby Axelrod				
Steve Serrao				
Jeffrey Cooper				
Frank Valentine				
Axe Capital				
Senior				
Orrin Bach				
New York				
Cold Springs				
Myrtle Beach, SC				
Deer Park				
Miami, Florida				
East River				



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"reactions" : [ ],
"urls" : [ ]
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"recipientId" : "2238462306",
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Categorise

Identification elements risk categories

Contextualize

Probable, possible or unlikely events

Tense

Past present or future

Score

High probability risk assessment in a collapsing timeframe

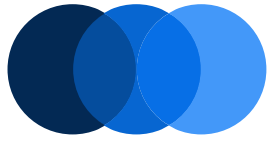
“I intend to abuse a child tomorrow”

Contextualize Possible Category Sexual Term Category Child Access Tense Future

HIGH vs **LOW**

“it would be hot to abuse a child”

Contextualize Unlikely Category Sexual Term Category Child Access



Child Exploitation

Law enforcement agencies are using Natural Language Processing (NLP) to investigate crimes.

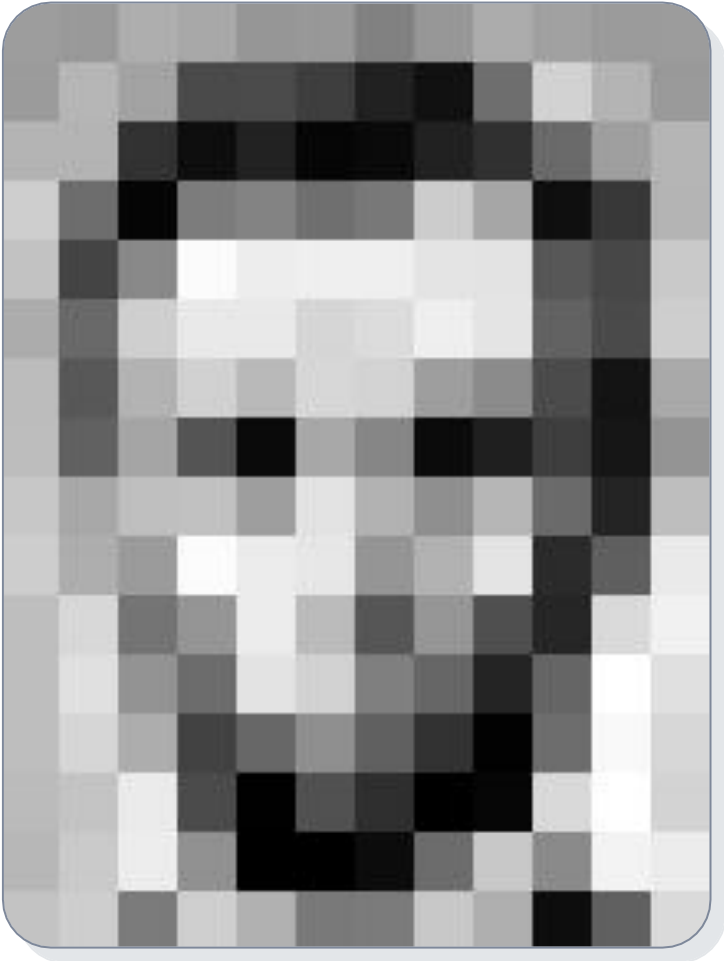


Computer Vision

Enables systems to see, identify and process images or videos in the same way that human vision does.

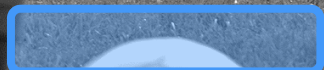


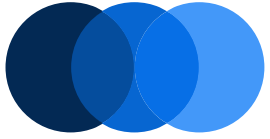
How Computer Vision Interprets Images



157	153	174	168	150	152	129	151	172	161	155	156
155	182	163	74	75	62	33	17	110	210	180	154
180	180	50	14	34	6	10	33	48	106	159	181
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172	106	207	233	233	214	220	239	228	98	74	206
188	88	179	209	185	215	211	158	139	75	20	169
189	97	165	84	10	168	134	11	31	62	22	148
199	168	191	193	158	227	178	143	182	106	36	190
205	174	155	252	236	231	149	178	228	43	95	234
190	216	116	149	236	187	85	150	79	38	218	241
190	224	147	108	227	210	127	102	36	101	255	224
190	214	173	66	103	143	96	50	2	109	249	215
187	196	235	75	1	81	47	0	6	217	255	211
183	202	237	145	0	0	12	108	200	138	243	236
195	206	123	207	177	121	123	200	175	13	96	218

157	153	174	168	150	152	129	151	172	161	155	156
155	182	163	74	75	62	33	17	110	210	180	154
180	180	50	14	34	6	10	33	48	106	159	181
206	109	5	124	131	111	120	204	166	15	56	180
194	68	137	251	237	239	239	228	227	87	71	201
172	106	207	233	233	214	220	239	228	98	74	206
188	88	179	209	185	215	211	158	139	75	20	169
189	97	165	84	10	168	134	11	31	62	22	148
199	168	191	193	158	227	178	143	182	106	36	190
205	174	155	252	236	231	149	178	228	43	95	234
190	216	116	149	236	187	85	150	79	38	218	241
190	224	147	108	227	210	127	102	36	101	255	224
190	214	173	66	103	143	96	50	2	109	249	215
187	196	235	75	1	81	47	0	6	217	255	211
183	202	237	145	0	0	12	108	200	138	243	236
195	206	123	207	177	121	123	200	175	13	96	218

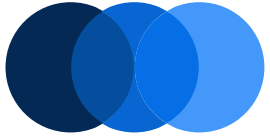




Digitization of Paper

Governments use Computer Vision (CV) with Machine Learning and Text Analytics to quickly pinpoint and extract information from paper files.





Maintenance Oversight of Equipment

Utilities are using Computer Vision (CV) to monitor equipment.



Deep Learning

A type of machine learning used in recognizing speech, identifying objects in images, generating new content, and more.

Comprised of three or more neural networks.



AI

Computer
Vision

Machine Learning

Deep Learning

Generative AI
"GenAI"

LLM

Natural
Language
Processing

Synthetic Data

Digital Twins



What is GenAI?

GenAI

An AI method that learns from real-world data to generate new content, such as text, images, audio, code, videos, and tabular data.



Large
Language
Models

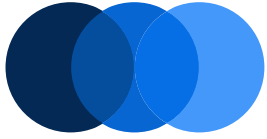
Synthetic
Data

Digital
Twins

Large Language Models (LLMs)

Deep learning algorithms that recognize, summarize, translate, predict, and generate content

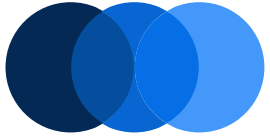




Public Commentary/ Regulations

Government agencies are using Natural Language Processing (NLP) with Large Language Models (LLMs) to glean insights from copious amounts of public commentary on regulations.





Specialized Copilot

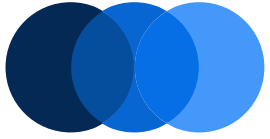
Large Language Models (LLMs) will help governments mine their own data and receive guidance on furthering their investigations or research.



Synthetic Data

Artificial data that's
manufactured.





Cyber Security

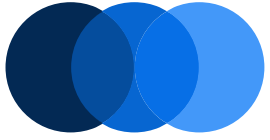
Organizations are using synthetic data and digital twins to simulate system environments in order to identify points of entry and to trick hackers.



Digital Twins

A virtual model designed to accurately reflect a physical object, system, or environment.

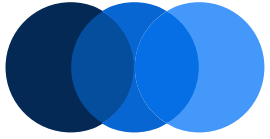




Policy Making

Governments are ascertaining the 'winners' and 'losers' of potential tax changes before regulations are implemented with the use of digital twins.





Flood Prediction

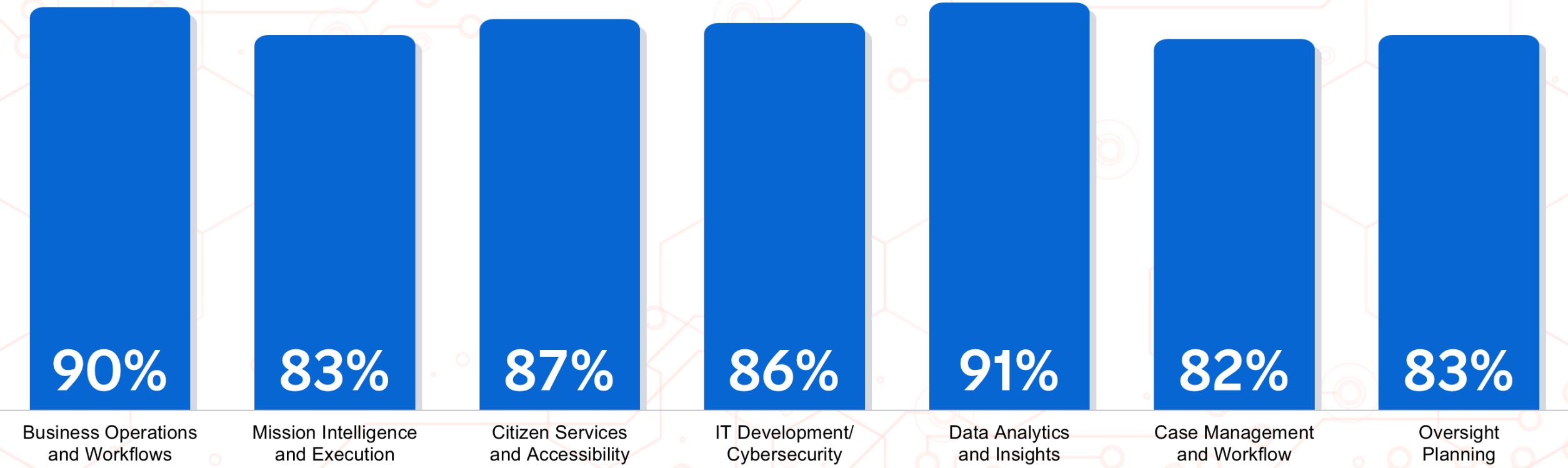
Governments are using digital twins to predict floods, enabling them to anticipate needs and allocate resources.



Gauging the Impact of Generative AI on Government

Survey by FedScoop

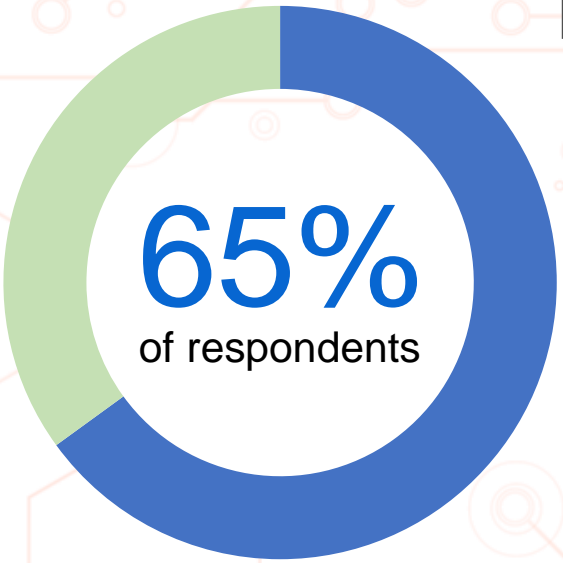
Top Types of Generative AI Solutions that Organizations Are Assessing:



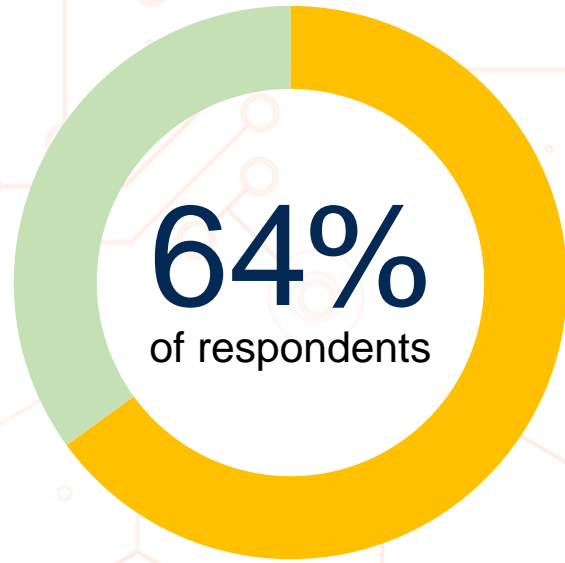
Gauging the Impact of Generative AI on Government

Survey by FedScoop

Primary Benefits



Technical Support



Ability to reduce the time required to complete work processes

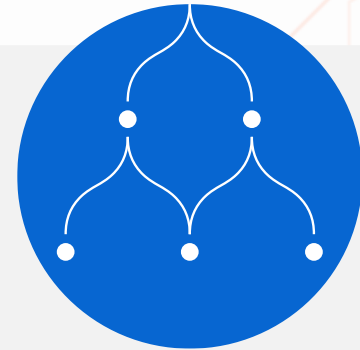
Why now?



Compute
Power



Data



Analytic
Models



What are Humans and Machines **good** **at?**



HUMANS

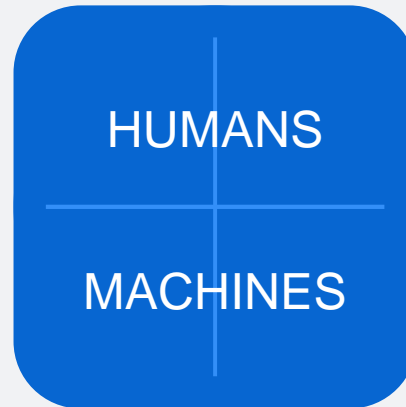
- Common Sense
- Intuition
- Creativity
- Empathy
- Versatility



MACHINES


- Large Data Sets
- Complex Calculations
- Learning
- Automation

When are humans and machines better together?




- + Making sense of patterns and trends surfaced from large data sets
- + Interpreting results from complex calculations
- + Assessing impacts of simulated scenarios
- + Handling exceptional cases apart from those that can be automated


Trustworthy AI



Developing and using AI technologies in an **ethical** manner




Ensuring AI does not harm people



Asking not just, “Could we?”, but also “Should we?”



Building AI that reflects **our values** as a society



Remembering the people **impacted by** each decision

Learn more about AI

Learn more about
AI in the public Sector



Learn more about
Generative AI at SAS



Thank you.

Jennifer Robinson
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