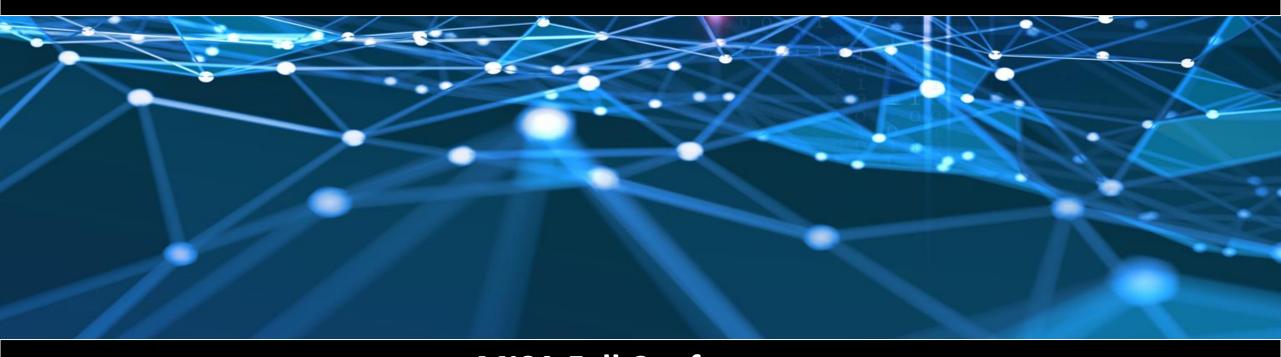
Efficiency and Compliance: The Intersection of Al and Records Management



MISA Fall Conference

Al and Beyond

October 20, 2023

Patricia C Franks PhD, CRM, CA, IGP, CIGO, FAI

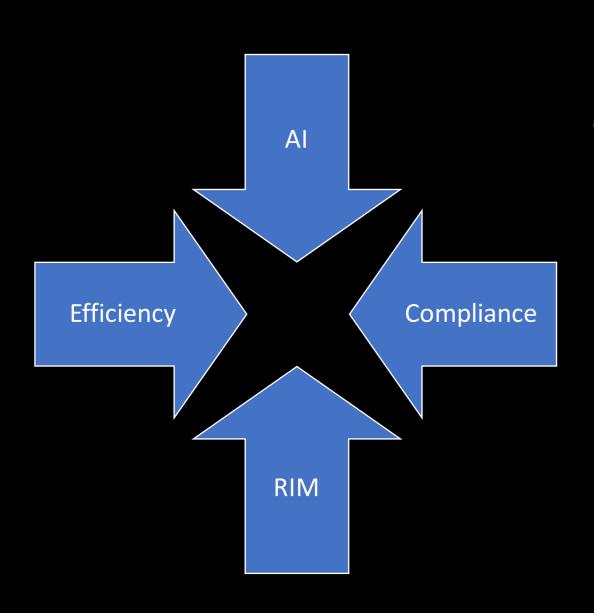
Professor Emerita San José State University

> Al Researcher InterPARES Trust^{Al}

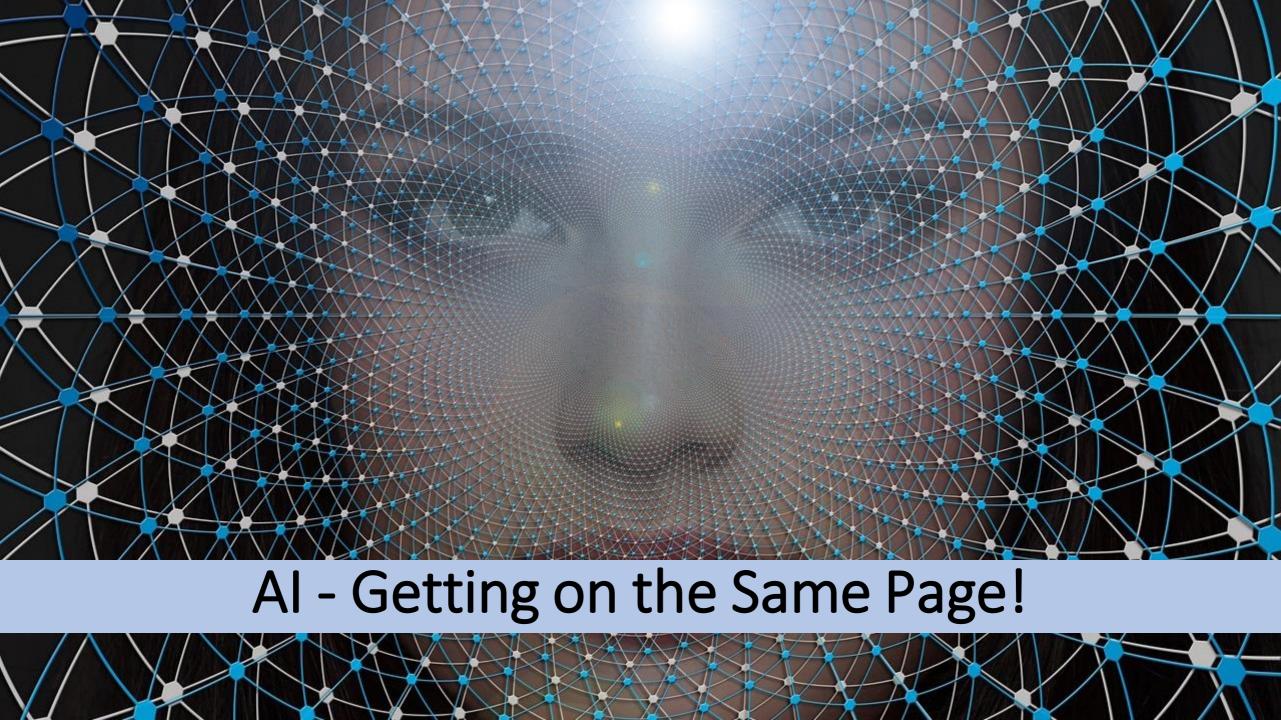
patricia.franks@sjsu.edu



Agenda







Artificial Intelligence Machine Learning Neural Networks Deep Learning **GPT** 2010 1950s - 1970s 1980s - 2000s 2020s































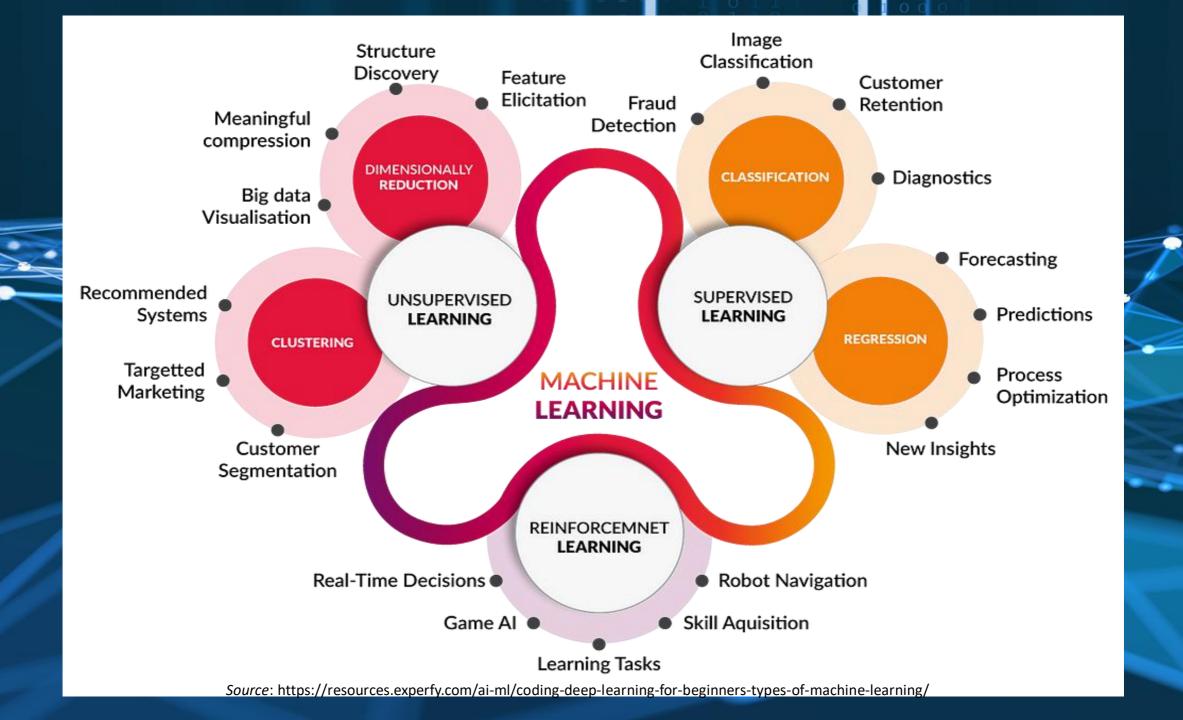


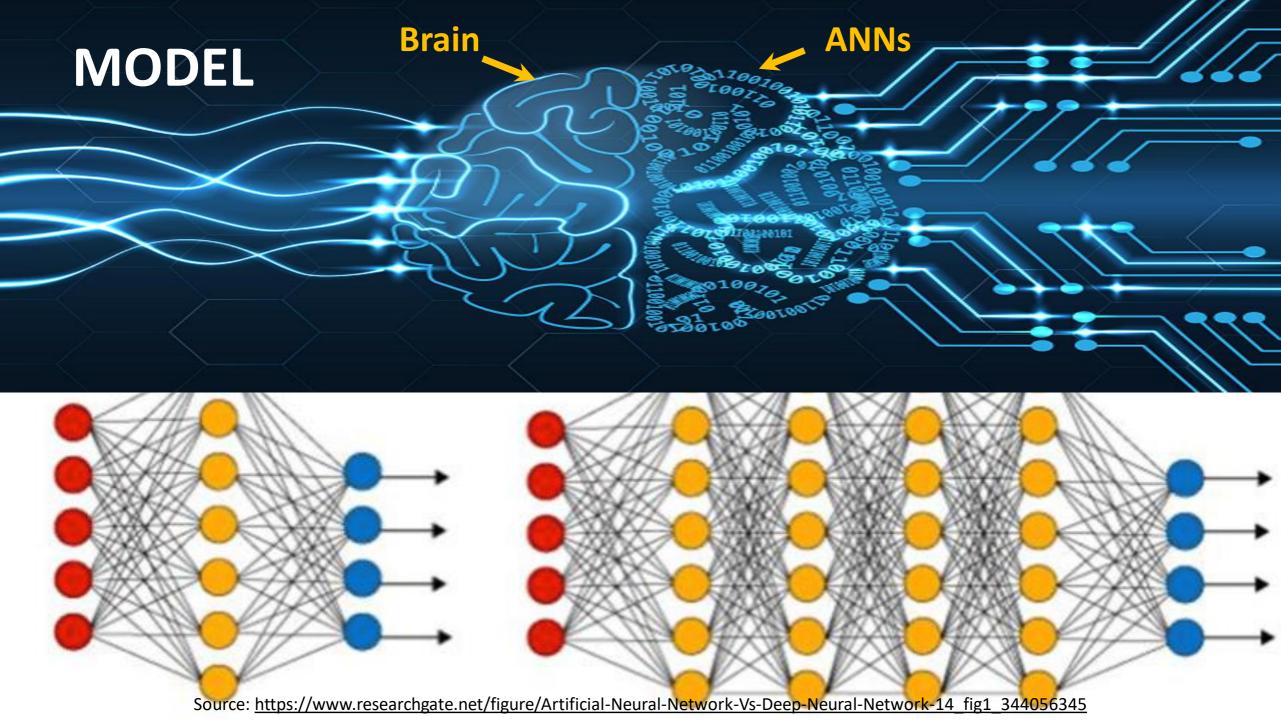








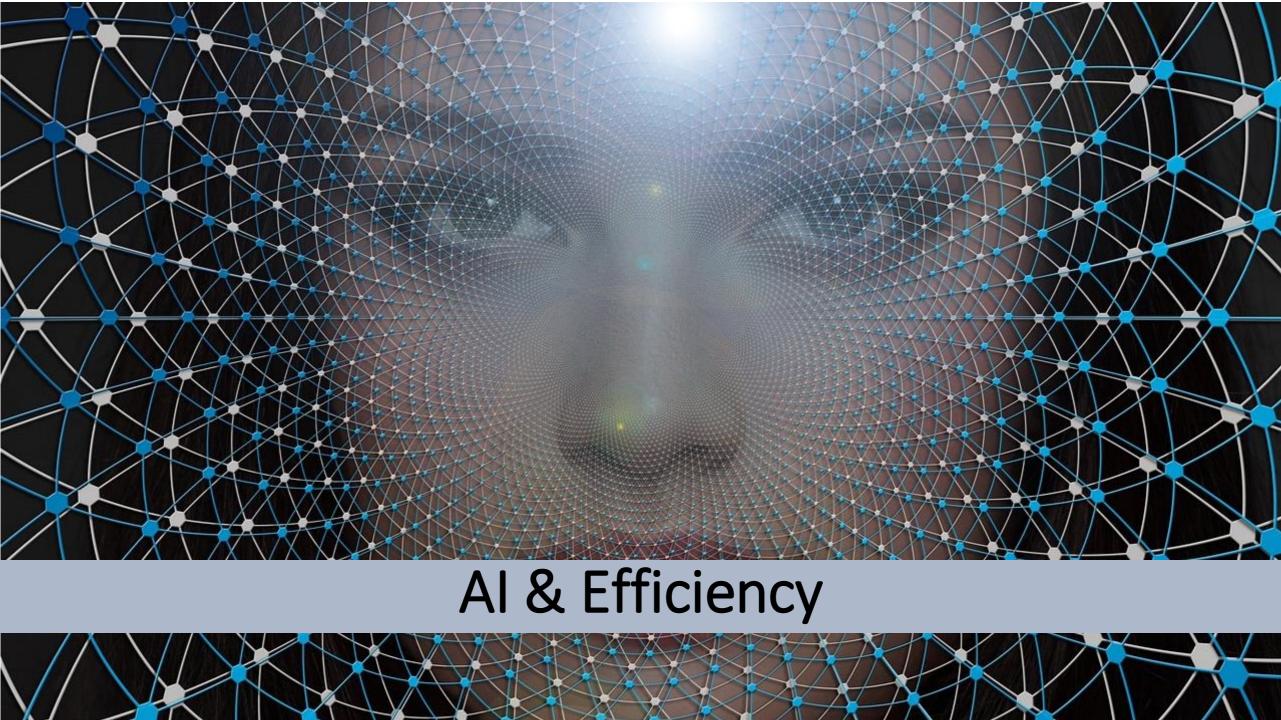




ChatGPT is an AI chatbot that uses natural language processing to create humanlike conversational dialogue. The language model can respond to questions and compose various written content, including articles, social media posts, essays, code and emails.

GPT stands for "Generative Pretrained Transformer." Reinforcement learning through human feedback-augments ChatGPT with machine learning to improve future responses.

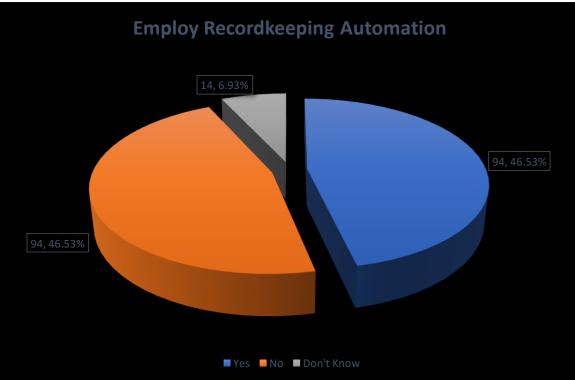




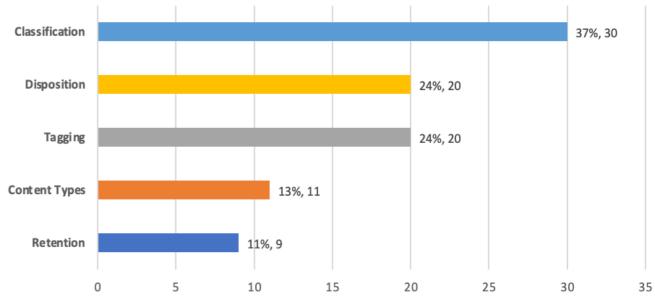
Benefits of Al in Content/Records Management

- Automates content creation and management
- Reduces time spent content sorting and tagging
- Good at processing large amounts of data and managing repetitive tasks
- Potential use for analyzing and tagging images, as well as keyword metadata enhancement
- Operates 24/7 without interruption or breaks and has no downtime
- Augments the capabilities of differently abled individuals
- Facilitates decision-making by making the process faster and smarter

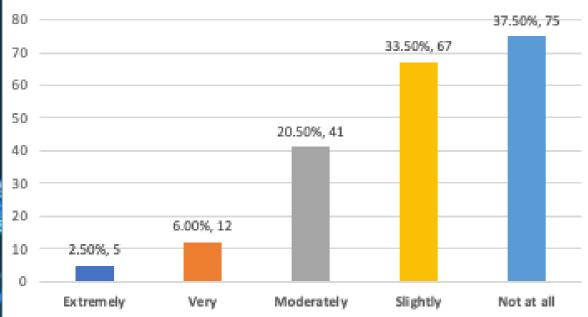




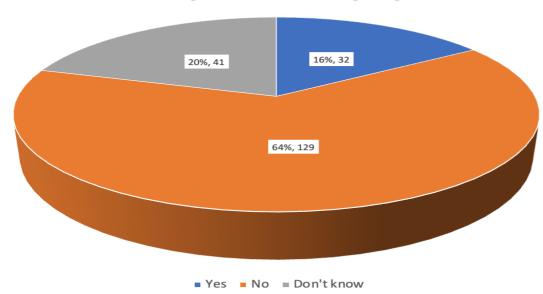






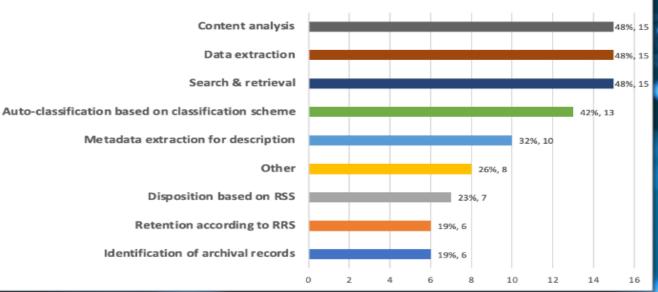






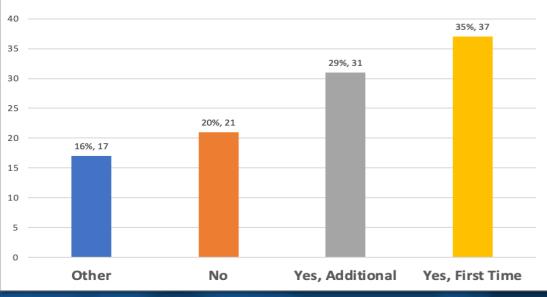


Al Uses within Organization

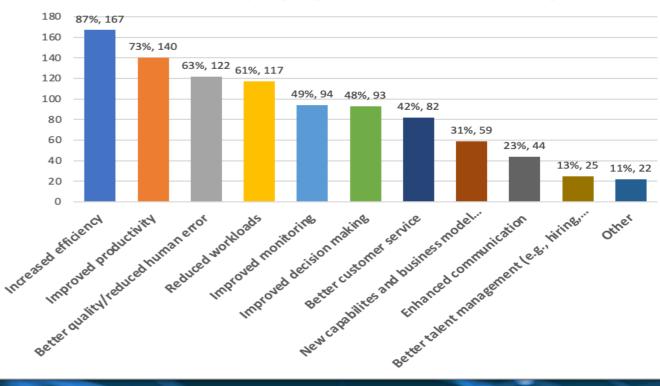




Plan to Use AI in Future



Reasons for Employing AI Tools or Technologies



Other Reasons to Employ Al

- Data Analysis/Research (2)
- Innovation/Improved Quality of Services (3)
- Data Management/Records Management (4)
- Improved Compliance (5)

3 Easy Ways to get started with Al for Content/Records Management

ROT + PII + Auto-classification

Efficient Records Management?

Efficient record management controls your files' entire lifecycles — from the moment they are created through their destruction. Business users are notified when documents are no longer required to be stored in the system and should be properly disposed of according to compliance.

National Archives discloses planned AI uses for record management

The records agency wants to use AI systems for auto filling metadata and responding to FOIAs, according to an inventory of the technology.

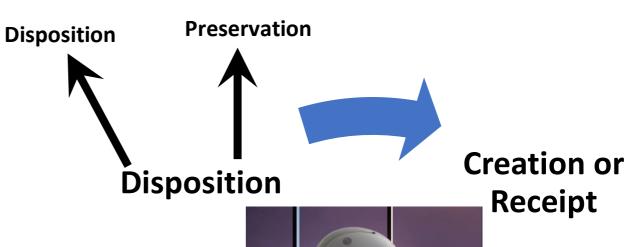
BY MADISON ALDER AND REBECCA HEILWEIL - AUGUST 25, 2023

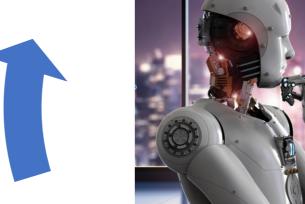


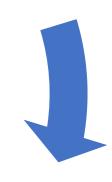


RIM Lifecycle

How can Al help?







Storage & Access



Maintenance & Use

Content Creation Example: ChatGPT

- O Hallucinations
- Automation Bias
- Societal Biases
- Misinformation
- O Privacy Implications



Introducing the adults in the room ©

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Research ~

API

ChatGPT ~

Safety

Company ~

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Maintenance & Use Example: Intelligent Document Processing

Automatically extract and classify unstructured and structured data using Al technologies like computer vision, machine learning, and natural language processing.



Hyland Alfresco CSP & AWS



Document AnalysisAmazon Textract

Automatically extract text and data from documents



Advanced Text
Analytics
Amazon Comprehend

Use natural language processing to extract insights and relationships from unstructured text.

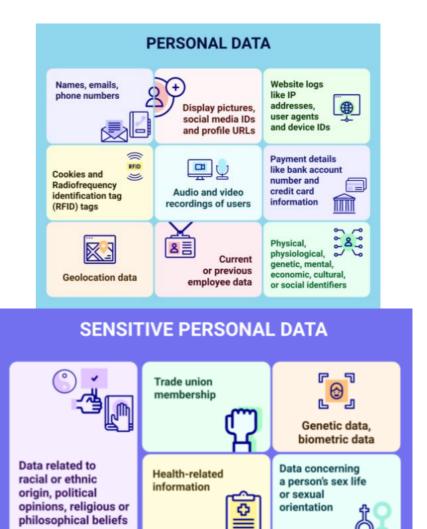


Image and Video
Analysis
Amazon Rekognition

Video and image analysis to applications to catalog assets, automate media workflows and extract meaning.

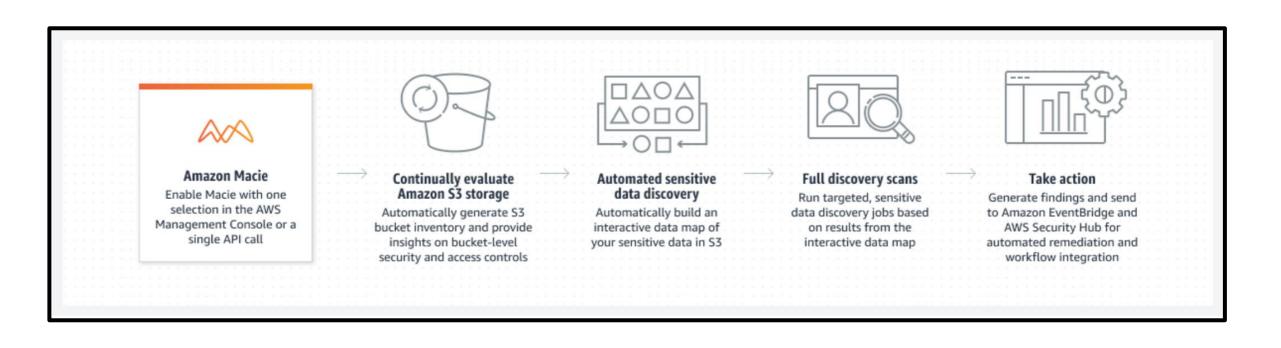
Storage Example: Sensitive Data

- PII personally identifiable information
- OPD personal data (GDPR)
- O PHI protected health information
- O PCI payment card industry



What about sensitive data in Amazon S3 Storage?

Amazon Macie - a data security service that uses machine learning (ML) and pattern matching to discover and help protect your sensitive data.



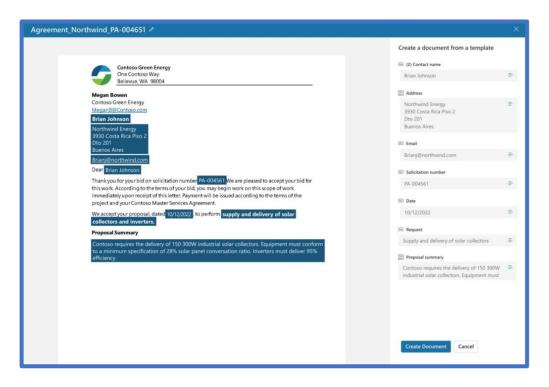
Retention & Disposition 2 Examples

- Integrated into the workflow
- Lifecycle approach to AI-enabled RIM Solution

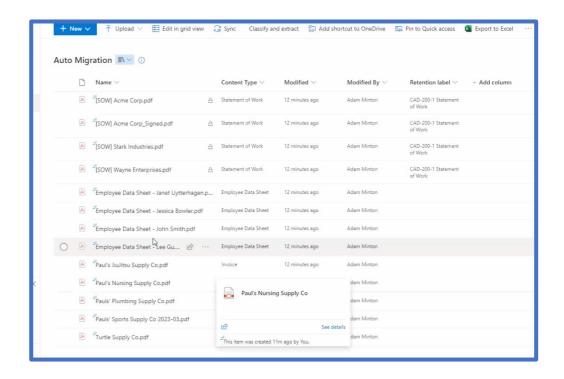


Microsoft Syntex

Content Al integrated in the flow of work



Content Assembly: Understand and assemble content with AI powered summarization, translation, auto-assembly, and annotations integrated into Microsoft 365 and Teams.

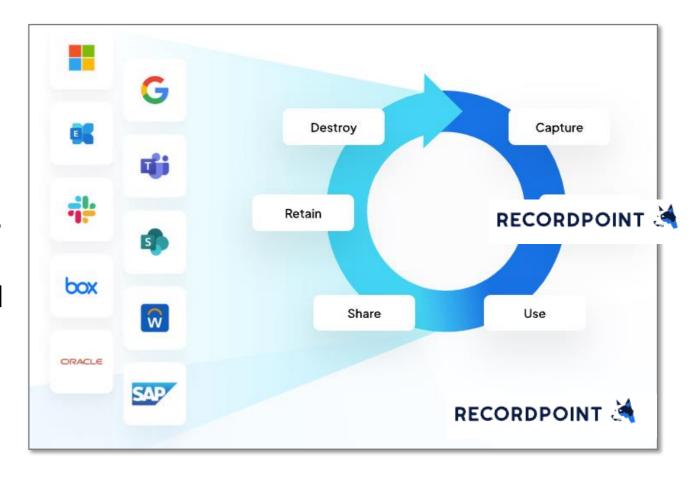


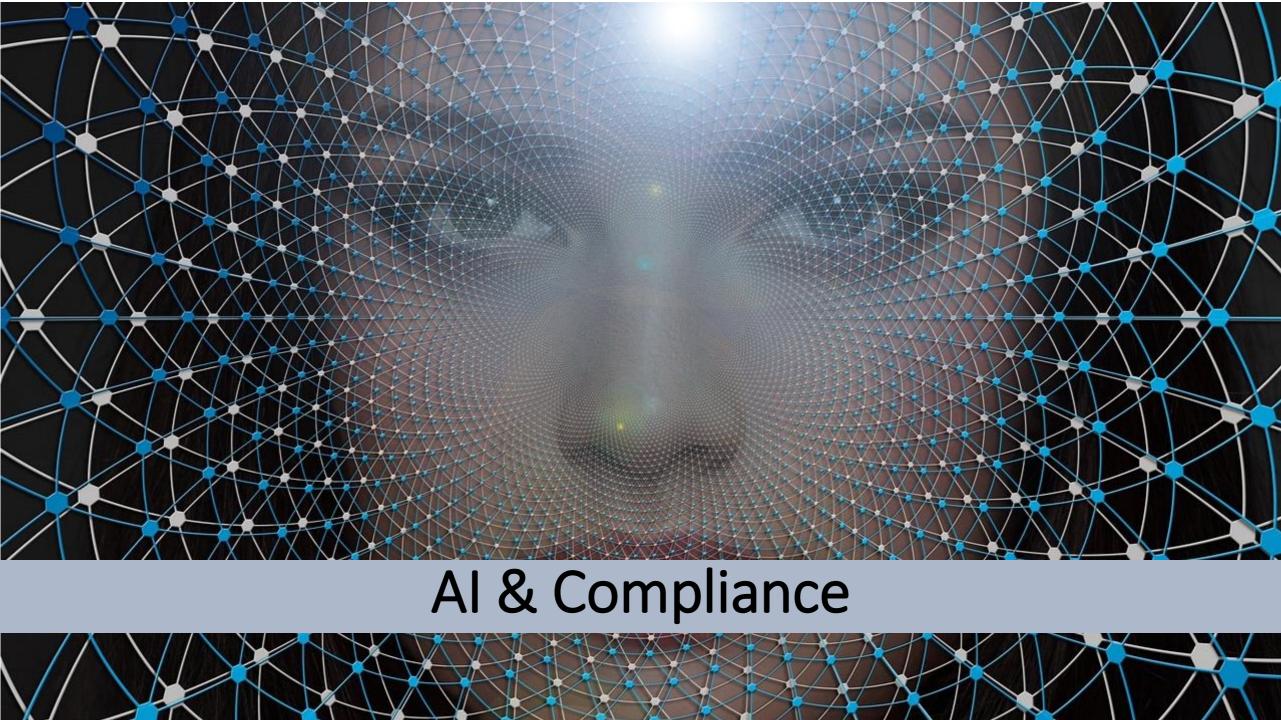
Retention: Link content type to retention labels. One test produced 97% accuracy for government content using 5 different content models.

Records365

Automatic & Compliant RM Solution

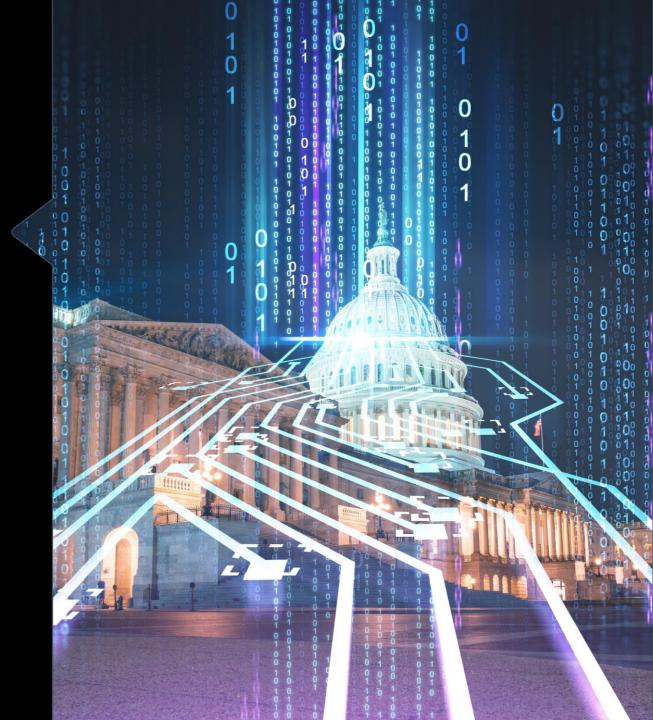
- Intelligent data classification using custom rules and machine learning to train the model.
- Al and ML to automatically analyze and classify records then flag for secure retention, disposition, or holds based on content in files and records.
- Sensitive data signaling to screen and locate sensitive data including Personally Identifiable Information (PII) and Payment and Information (PCI).





Compliance

Ensuring that your records
management policy is being
followed, and that you are in
line with any retention
schedules required by law.

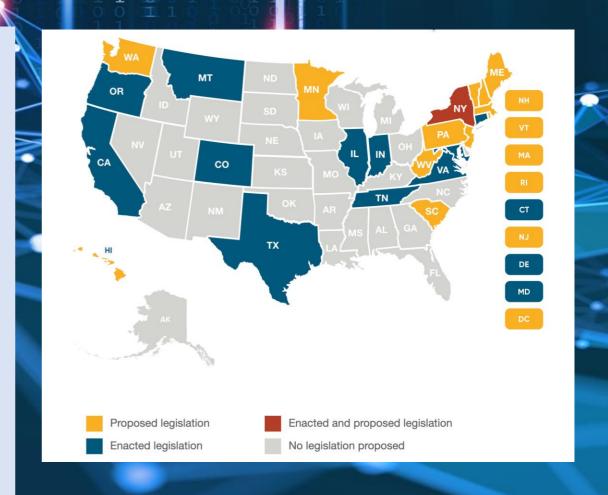


Example on State Level -- New York

- Automated employment decision tools

Law #: 2021/144

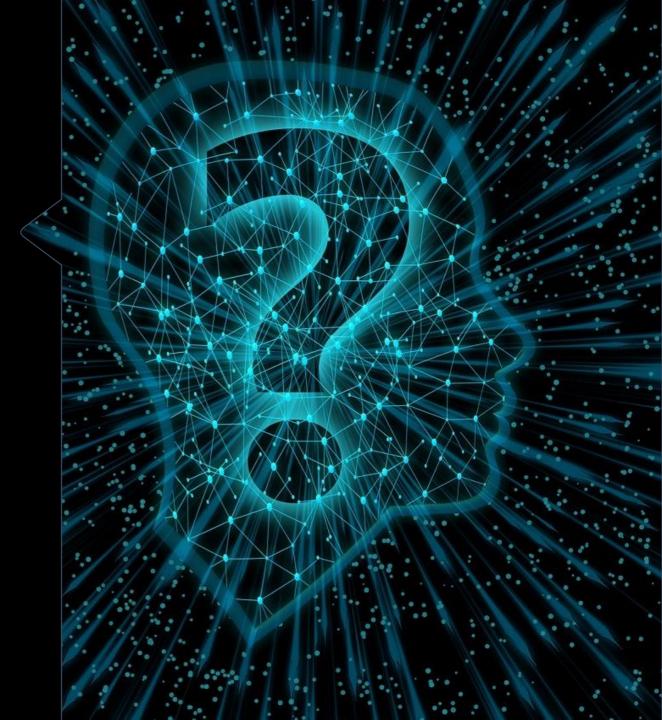
- Requires that a bias audit be conducted on an automated employment decision tool prior to the use of said tool.
- Candidates or employees that reside in the city be notified about the use of such tools in the assessment or evaluation for hire or promotion, as well as, be notified about the job qualifications and characteristics that will be used by the automated employment decision tool.
- Violations of the provisions of the bill would be subject to a civil penalty.



US State-by-State AI Legislation Snapshot

Al Policies

Al policies provide your company's employees with a clear understanding of their rights and responsibilities when it comes to Artificial Intelligence (AI). Your policies should cover data privacy, bias, transparency, and accountability. They should also provide guidance on how to handle potential ethical dilemmas.



Boston's interim guidelines on generative AI emphasize responsible experimentation. The policy encourages city staff to fact-check AI-generated content, disclose AI use in public-facing content and written reports, and avoid the sharing of sensitive information with AI systems.

2 recommended uses:

- Writing a memo
- Writing a job description



City of Boston Interim Guidelines for Using Generative Al

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Eall City agencies and departments with the exception of Boston Public Schools

M.

Generative Al is a tool. We are responsible for the outcomes of our tools. For example, if autocorrect unintentionally changes a word - changing the meaning of something we wrote, we are still responsible for the text. Technology enables our work, it does not excuse our judgment nor our accountability.

These guidelines should be replaced in the future with policies and standards. But we want to encourage responsible experimentation and we encourage you to try these tools for yourselves to understand their potential. The Department of Innovation and Technology will support events and workshops that can support people and teams interested in learning more about these technologies. For the time being we encourage you to watch this video from Innovate.US about how to get started with generative AI in government:

https://bit.ly/InnovateUS-AI

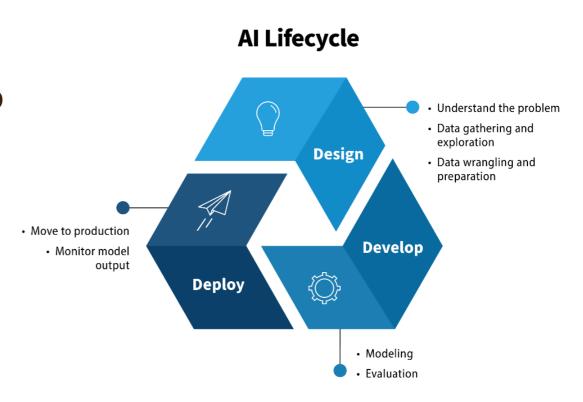
You can also share your experiences, thoughts, and concerns via this online form: https://forms.gle/ BptUcVhRdnTwHdxJ7



Paradata: Documentation of the Al Process

Paradata is the information about the procedure(s) and tools used to create and process information resources, along with information about the persons carrying out those procedures.

~ITrustAI working definition



Metadata & Paradata -- relationships + purpose

Metadata

about

The Information Resource

For the purposes of documenting, describing, preserving or managing that resource.

Paradata

about

The Al Process

Enables processual insight, transparency, accountability.

Examples of Paradata

Technical Paradata

- Al Model (tested & selected)
- Evaluation & performance metrics
- Logs generated
- Model training data set
- Training parameters for model
- Vendor documentation
- Versioning information

Organizational Paradata

- Al policy
- Design plans
- Employee training
- Ethical consideration
- Impact assessments
- Implementing process
- Regulatory requirements

Artificial Intelligence Risk Management Framework (AI RMF 1.0)



January 2023
US Department of Commerce

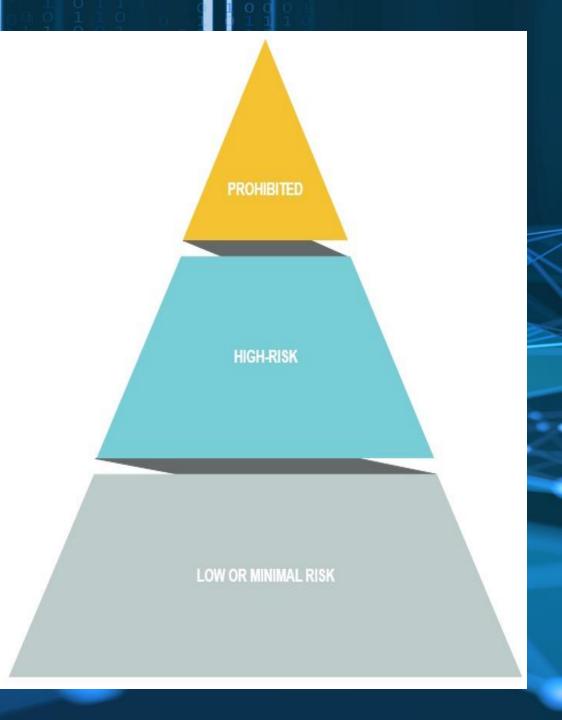
Review of AI RMF 1.0 by Pat Franks
All text and images taken from the Framework

Select a framework for Guidance

A new working group at the National Institute of Standards and Technology will build on the NIST AI Risk Management Framework to address generative AI.

The AI RMF refers to an AI system as an engineered or machine-based system that can, for a given set of objectives, generate outputs such as predictions, recommendations, or decisions influencing real or virtual environments. AI systems are designed to operate with varying levels of autonomy (Adapted from: OECD Recommendation on AI:2019; ISO/IEC 22989:2022).

Addressing, documenting, and managing AI risks and potential negative impacts effectively can lead to more trustworthy AI systems.





Examples of documentation that may be needed to meet the guidelines in the NIST AI RMF Framework

Govern: Legal and regulatory requirements involving AI are understood, managed, and documented.

Map: Document AI system's features and capabilities that require human oversight. Establish practices for AI oversight in accordance with policies. Develop training materials about AI system performance, context of use, known limitations and negative impacts, and suggest warning labels.

Measure: How has the entity documented the AI system's data provenance, including sources, origins, transformations, augmentations, labels, dependencies, constraints, and metadata?

Manage: Responses to the Al risks deemed high priority as identified by the Map function, are developed, planned, and documented. Risk response options can include mitigating, transferring, avoiding, or accepting.

Representations & Display to Promote Al Process Transparency

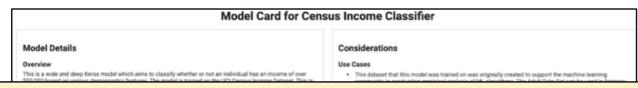
Microsoft Datasheets for Data Sets (2018)
Aether Data Documentation Template (2022)

Data creators should document the answers for people considering using the dataset to train or evaluate models; people auditing a model or AI system; stakeholders impacted by model(s) trained or evaluated on the dataset; future you or your own teammates.

слантріс questions.

- 1. What mechanisms or procedures were used to collect the data (e.g., hardware apparatus or sensor, manual human curation, software program, software API)?
- 2. Which version of the dataset should be documented (dataset shared with others, dataset used in training/testing)?

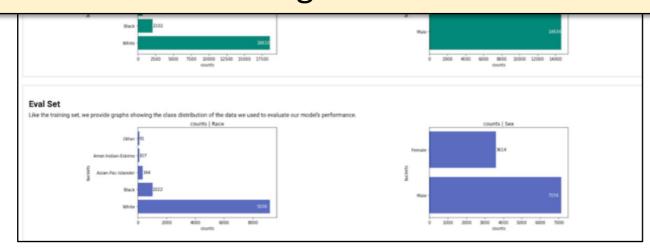
Representations & Display to Promote Al Process Transparency



Google Model Cards (2018) - Once the Model Card Toolkit has populated the

Salesforce & Model Cards

Documentation. Model cards and product documentation provide a wealth of information to customers, sharing key information such as the purpose behind particular AI models, how Salesforce trains AI models, and any potential risks associated with using AI.



Additional information on this example card is a Quantitative Analysis section showing graphics that visualize how the AI performs for data sliced by demographics such as race & sex.

Representations to Promote Al Process Transparency

Mortgage Evaluator Governance FactSheet

Created to demonstrate how development and deployment facts of a mortgage evaluation model can be recorded and viewed



IBM Fact Sheet - a collection of relevant information (facts)

about the erection and

Using AI Factsheets for AI Governance

Last updated: Aug 17, 2023

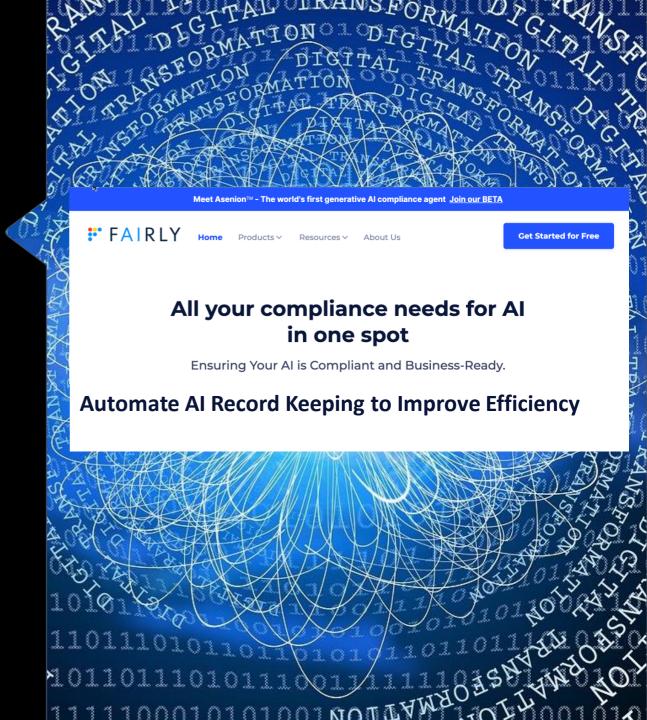
Use a model inventory and AI Factsheets as part of your AI Governance strategy to track the lifecycles of machine learning models from training to production. View factsheets for model assets that track lineage events and facilitate efficient ModelOps governance.

Purpose	Predict mortgage approval
Risk Level	High
Model Policy	1. Datasets must be approved and in data catalog. 2. Race, ethnicity, and gender of applicant cannot be used in models used to make mortgage related decisions 3. Model predictive performance metrics must minimally include accuracy, balanced_accuracy and AUC score. 4. Models must be checked for bias using Disparate Impact. 5. Models must be checked for faithfulness of explanations. 6. Models must be checked for robustness to Adversarial attacks using Empirical Robustness metric. 7. Models must be checked for robustness to dataset shift.

or actions taken during the creation and deployment process of the model or service.

Al Model - 1 Example of Al Documentation

Documentation is essentially a form of record keeping. Consistent documentation helps Al model developers and data scientists ensure they follow best practices, policies, and regulations. Documentation also allows developers' QA and compliance counterparts to verify and evaluate risk consistently — ultimately mitigating and reducing risks before they cause financial and reputational harm.



EEOC Settles First-Ever Al Discrimination Lawsuit

By Raeann Burgo and Wendy Hughes © Fisher Phillips

August 17, 2023

The Equal Employment Opportunity Commission's (EEOC) Aug. 9 legal filing in a New York federal court revealed that a tutoring company agreed to pay \$365,000 to resolve charges that its Alpowered hiring selection tool automatically rejected women applicants over 55 and men over 60.

A Milton resident's lawsuit against CVS raises questions about the use of Al lie detectors in hiring

A class-action lawsuit was filed last month in Suffolk Superior Court against CVS Health Corp. by Milton resident Brendan Baker, who failed to get a job at the Rhode Island-based drugstore chain after completing an Al-assisted video interview conducted using the platform HireVue, according to the complaint. ~Boston Globe, May 22, 2023



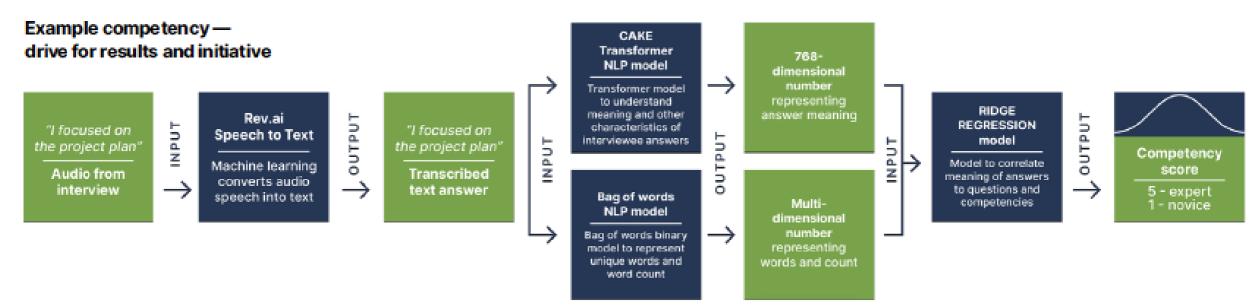
The Salt Lake City-based company said the controversial feature—which used algorithms to assign certain traits and qualities to job applicants' facial expressions in video interviews—was discontinued in March 2020 after internal research demonstrated that advances in natural language processing had increased the predictive power of language analysis and "visual analysis no longer significantly added value to the assessments."

HireVue's platform has hosted more than 19 million video interviews for over 700 customers worldwide. The product is most often used as an automated screening tool at the start of the hiring process for high-volume employers. The structured interviews are typically based on a customized job analysis of the role and ask job applicants to respond to a series of questions in a recorded video. HireVue's software assesses the applicant's suitability for a role and is meant to reduce individual human interviewers' intrinsic biases when rating candidates. It analyzes various characteristics of the video interview, including applicants' responses, speech and, until last year, facial expressions.

"Over time the visual components contributed less to the assessment to the point where there was so much public concern to everything related to Al that it wasn't worth the concern it was causing people," said HireVue CEO and Chairman Kevin Parker.

Personality & Work with People Single Comprehensive Accessment

Representations to



document is intended to provide information on how the Artificial Intelligence (AI)-based assessments within our Hiring Experience Platform™ work, including when, how, and why we use this technology to facilitate our customers in making their hiring decisions. It is separate from our privacy policy, which is available here. Please note that this is a 'living document' which will be updated from time to time, based on updates to our systems and processes.

this Explainability Statement to explain HireVue's processes and in an effort to assist our customers in fulfilling their obligations as 'data controllers' in compliance with data protection laws including EU / UK General Data Protection Regulation (GDPR).

If you have any queries, we can be contacted at 10876 South River Front Pkwy #500. South Jordan,

Al in Law Enforcement

Black mom sues city of Detroit claiming she was falsely arrested while 8 months pregnant by officers using facial recognition technology

Al used: Facial Recognition

Party using it: Detroit Police Department

Information produced by AI: Unreliable facial recognition match

Result:

- False arrest by police
- Lawsuit against police department & detective

Contributing factors:

- Use of photo from 2015 in photo lineup rather than 2021 driver's license photo
- Facial recognition algorithms known to more likely misidentify racial minorities (bias).
- Overreliance on AI by humans.

What kind of paradata might be useful in this case?

- Al facial recognition product?
- Training dataset?
- Accuracy rate of model?
- Vendor documentation?
- Impact assessments?
- Ethical considerations?
- Employee training?

After the fact:

Police Chief says, "it was not an Al failure but an investigative failure."

Police are changing their policy!

Be Al Ready!

- Recognize the value of using automated systems to capture, classify, query, aggregate, and secure records at scale
- Be aware of Al-related Risks
- Keep abreast of new AI tools, techniques, and vocabulary
- Understand governing laws and regulations
- Look to AI standards for guidance
- Recognize the value of working as part of a team
- Learn from AI implementations in other domains—good ideas are worth adopting and/or adapting!
- Leverage the work completed through research projects, such as InterPARES Trust AI

Thank you!

Dr. Patricia C. Franks

CA, CRM, IGP, CIGO, FAI Professor Emerita, SJSU Researcher, InterPARES Trust^{AI} Member, CIGOA Board of Governors

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