



Council Study Session

City AI Initiatives and GovAI Coalition Summit Study Session | October 25, 2024
Information Technology Department

Khaled Tawfik, Chief Information Officer

Leila Doty, Privacy and AI Analyst

Namrata Batra Agrawal, Products & Projects Manager

Albert Gehami, Digital Privacy Officer

Angela Zhao, Privacy and AI Analyst

Agenda

- Introduction
- What is AI?
- Gaining Value from AI in the City
- Laying the Foundation for Responsible AI
- Support beyond the City (GovAI Coalition)
- Feedback & Questions

San José Civic Innovation & AI Hub



**Bloomberg
Philanthropies**



**San José Youth
Empowerment
Alliance**



#1
**Most Transformative
University**

Money Magazine

Takeaways



Intentional investments in AI initiatives has provided the City with more efficient and accessible services for residents.



Building trust among the community and City staff through technical education promotes inclusion and moves San José forward for everyone.



Responsible AI governance maximizes the benefits to residents while mitigating potential risks.



By founding the GovAI Coalition, the City advanced its AI program while affirming its national leadership in responsible and effective use of AI.

What is AI?

With Rapid Innovation, Associated Risks Increase



1950

1970

1990

2000

2010

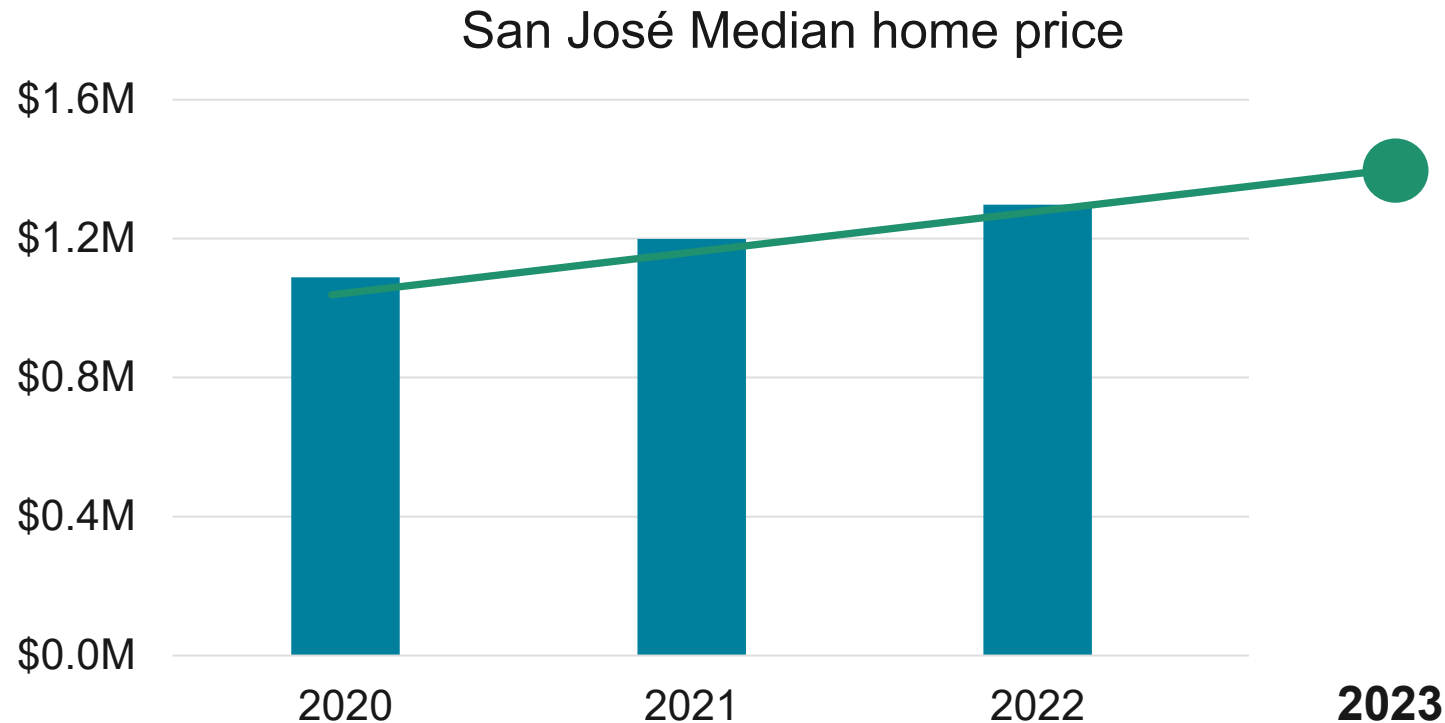
2020

2030

Turing
Test

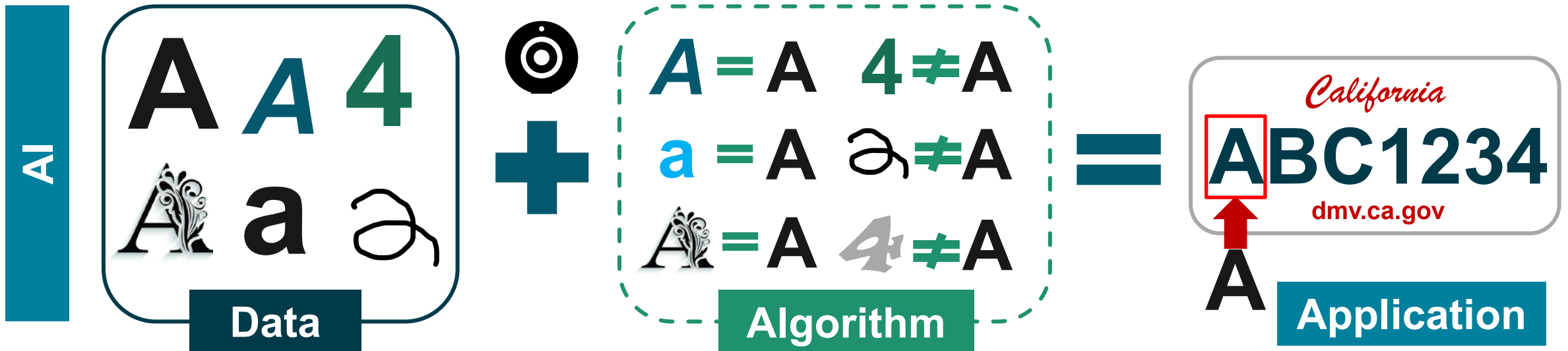
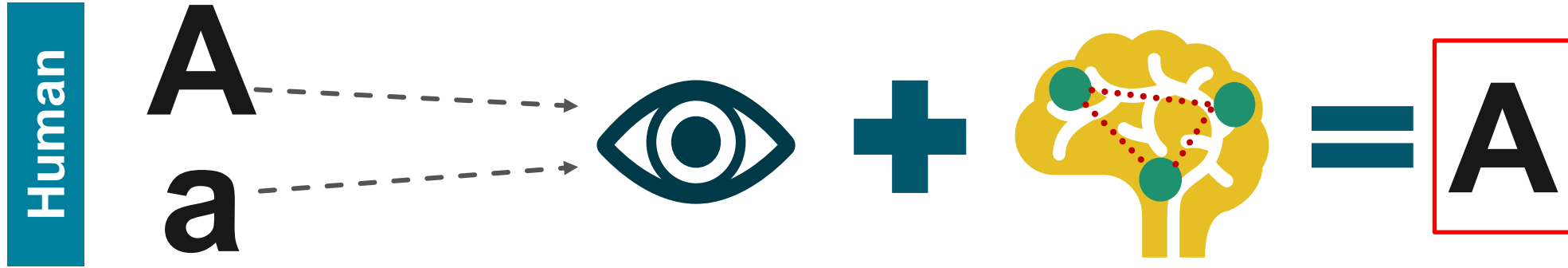


Modern “AI” Works By Finding Patterns



This simple idea
completed
trillions of times
creates the
“magic” behind AI

AI Computer Vision is Identifying Patterns in Shapes

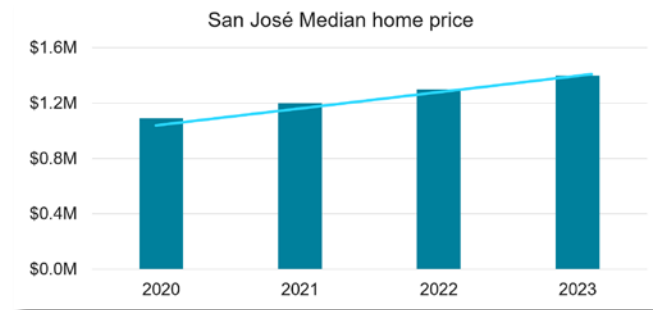


AI Comes in Many Different Types

Type of Output

Prediction AI
“forecasting”

Example



Perception AI
“identifying”



Generative AI
“creating”



ChatGPT

ChatGPT:

Finding
patterns to
generate
the next
word

Find the pattern to generate the next word

The San José Sharks are the best at hockey.

Ask ChatGPT



What 5 questions can we expect from a City Council study session on AI?



- How will AI directly **improve the quality of life** for our residents?
- What steps will we take to ensure AI solutions are **accessible and equitable for all residents**, including marginalized communities?
- How will the City **protect residents** from potential job displacement or economic disruption caused by AI automation?
- What safeguards are in place to **ensure AI systems are unbiased** and do not unintentionally harm vulnerable populations?
- How will we **involve residents in decision-making** about AI adoption, and how will we ensure transparency in its use?



**Generated in
5 seconds**

Input:
16-page memo

Prompt

Hi ChatGPT, I want you to **create a summary of item 7.1 from the October 29 City Council Agenda.**
"Agenda link"

Use the attached memo.
Create a concise and professional summary with at most 5 bullet points.

Ask ChatGPT: Summarizing October 29 Council Agenda

Output



Summary of Item 7.1: BeautifySJ Neighborhood Blight Reduction

- **BeautifySJ Overview:** Focuses on reducing blight through graffiti removal, illegal dumping cleanup, and community engagement using a strategy of Education, Eradication, and Enforcement.
- **Key Results (FY 2023-2024):**
 - Removed nearly 3 million square feet of graffiti, 20% of which was gang-related.
 - Collected 9.55 million pounds of trash, a 33% increase over last year.
- **Community Impact:** 17,468 volunteers cleaned up 907,965 pounds of litter, with partnerships involving 74 schools and local groups.
- **Program Growth:** Expanded staff and launched new initiatives like Clean Gateways and Beautify Your Block to enhance city beautification (**Memorandum (6)**).

AI in the City

AI Opportunities To Support City Goals

City Council Focus Areas



Increasing Community Safety

- ALPR, speeding cameras, red light cameras
- Road safety detection (road hazards)



Reducing Unsheltered Homelessness

- Data-informed Decisions
- AI opportunities with Housing and Planning



Cleaning Up Our Neighborhoods

- Road Safety Detection (graffiti & trash removal)
- Improve customer satisfaction by proactively detecting SJ311 services
- Streamlined & automated services
- AI waste sorting solutions



Attracting Investment in Jobs and Housing

- Efficient building permit process
- Data-informed Decisions
- Reducing bus travel time
- City AI partnerships with SJSU

Staff Upskilling Programs



Data Upskilling

- Initiated in 2023
- Train City staff to acquire data skills and promote data governance processes
- Increase efficiency and quality of services

AI Upskilling

- Initiated in 2024
- Train City staff to build AI tools to achieve high efficiency
- Partnership with SJSU



I was able to transform *thousands* of lines of data into one singular visual that users can appreciate.



Initial time savings with AI

Staff reported saving **more than 50%** on specific tasks after receiving AI training from the IT Department

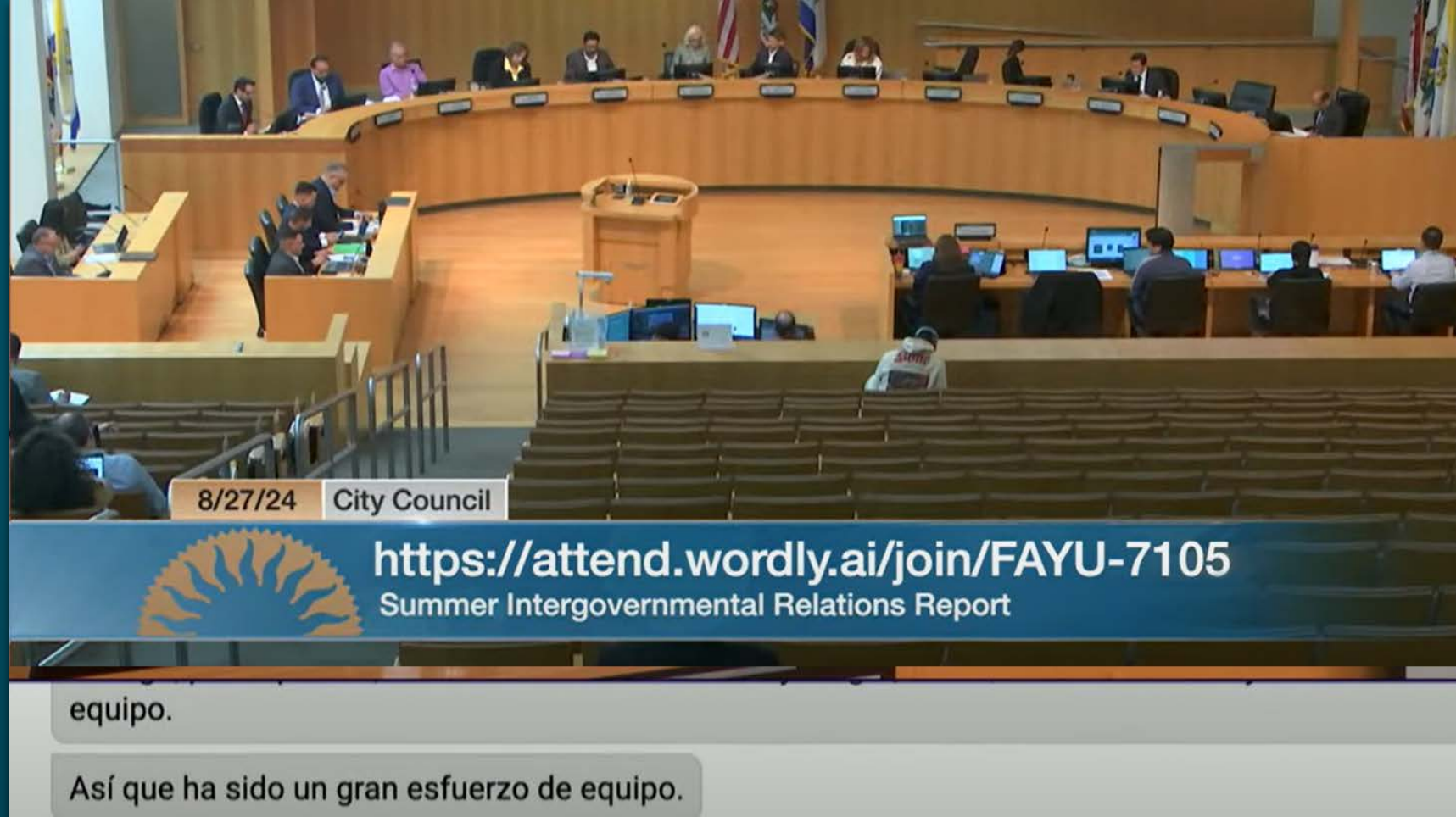
Hundreds of staff trained in AI through ITD

Based on post-training survey of staff



Photo by [Trisha Mendoza](#) on [Unsplash](#)

AI Bridges Language Barriers



- Two-way interpretation in **50+** languages at **25%** of the cost of in-person interpreters for 2 languages
- **370%** increase in online views due to Spanish captioning
- City staff uses AI translate with San José 311 (SJ311)

Traffic Signals: Reduce Bus Travel Time by up to 20%



Optimized traffic at intersections using AI

Downtown San José bus lines 66 and 68

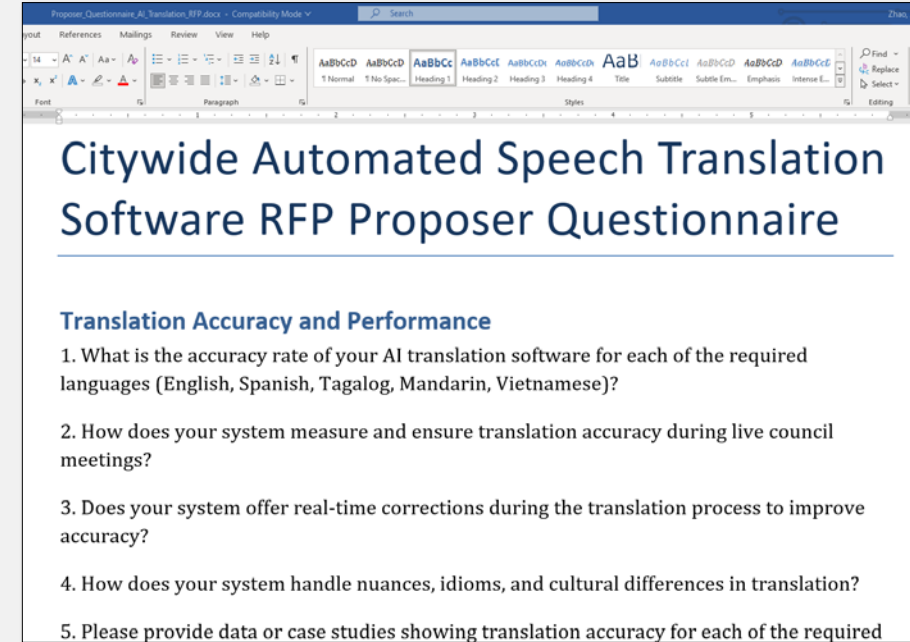
- Up to **20%** faster
- **50%** less time at red lights

Benefits

- **14%** decrease in fuel consumption
- Reduction in emissions
- **20%** reduction in commuting time
- Improves public transit experience



Prompt

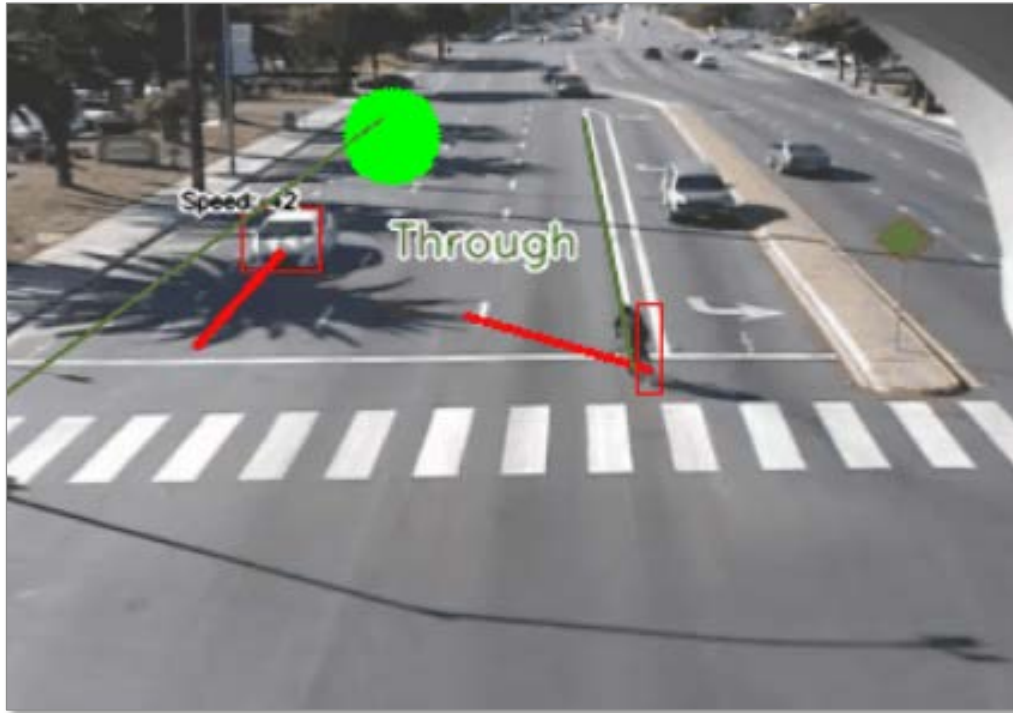


Drafting Request For Proposal Solicitations

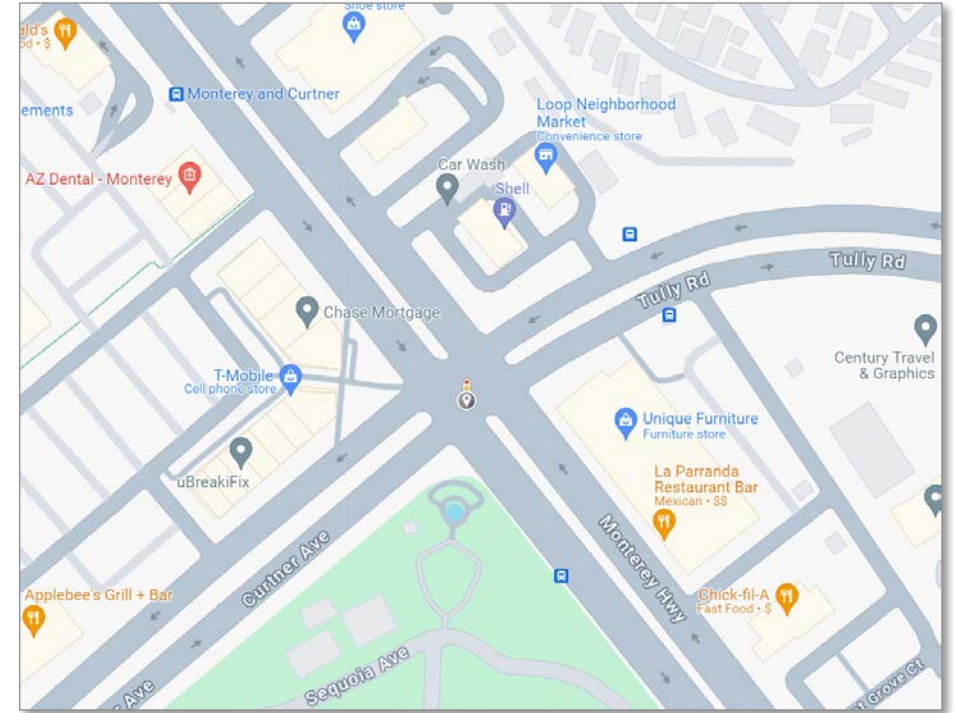
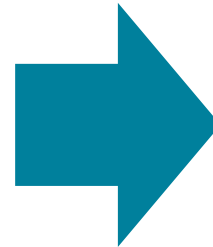
- Ask ChatGPT to create a draft in minutes to identify questions that really matter
- Jumpstart laborious RFP development and save staff expertise for refining business requirements



AI Vision Traffic Cameras Support Vision Zero



View from AI traffic camera monitoring near miss



Data answers key safety questions

95% vehicle count accuracy and **82%** pedestrian count accuracy informs traffic planning

24/7 intersection monitoring provides critical data to help reduce traffic fatalities

Responsible AI

AI Risks Are Well-Documented

OCTOBER 24, 2019 | 4 MIN READ

Racial Bias Found in a Major Health Care Risk Algorithm

Black patients lose out on critical care when systems equate health needs with costs

World

Insight - Amazon scraps secret AI recruiting tool that showed bias against women

By Jeffrey Dastin

October 10, 2018 5:50 PM PDT · Updated 5 years ago



Microsoft's Tay AI chatbot goes offline after being taught to be a racist

The internet teaches Microsoft a lesson in the dangers of artificial intelligence and public interaction.

California sidelines GM Cruise's driverless cars, cites safety risk

By Hyunjoo Jin and David Shepardson

October 24, 2023 4:38 PM PDT · Updated a month ago

BOT BUST

Professor Flunks All His Students After ChatGPT Falsely Claims It Wrote Their Papers

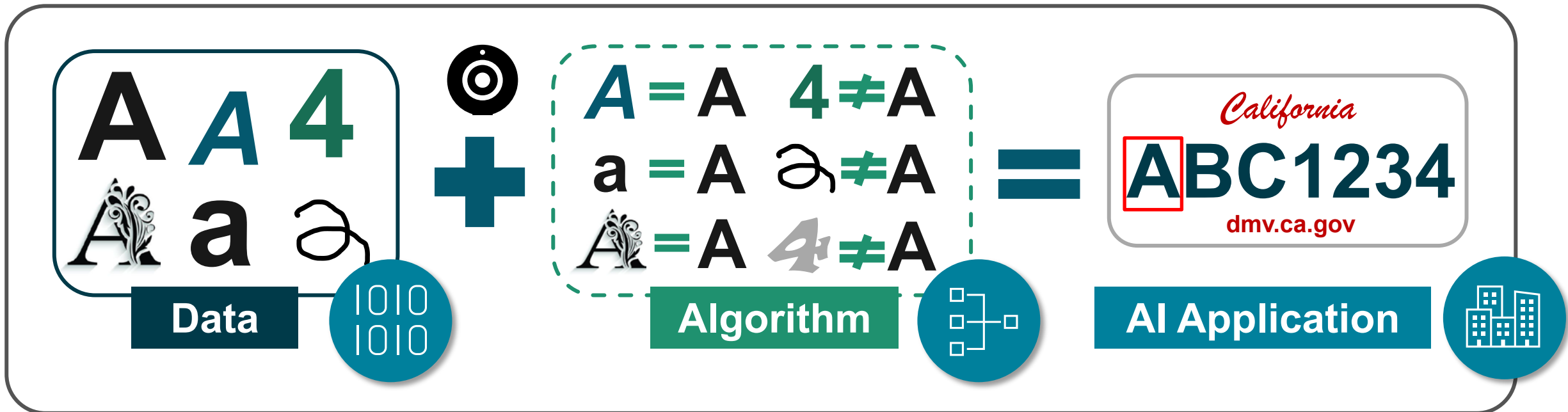
Texas A&M University—Commerce seniors who have already graduated were denied their diplomas because of an instructor who incorrectly used AI software to detect cheating

BY MILES KLEE



Reminder:

AI can be examined in three ways



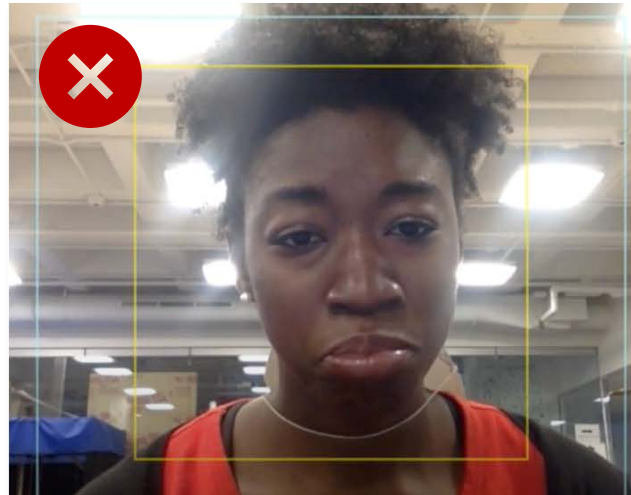
1010
1010

Data

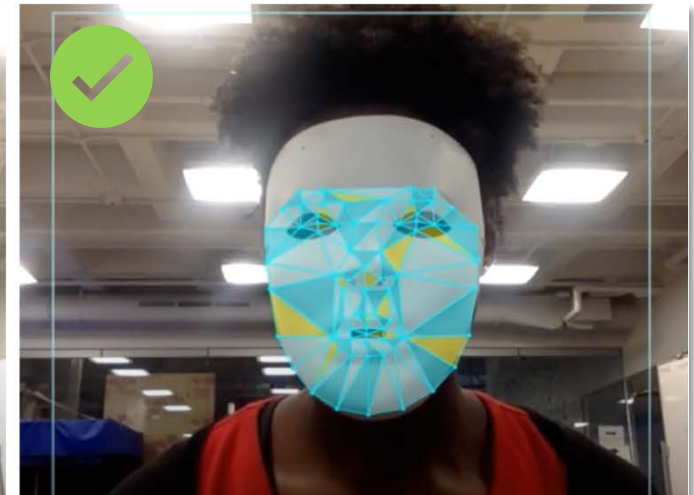
Risk:
Algorithmic Bias

Algorithmic Bias

Systematic and repeatable errors in a computer system that create unfair outcomes



dark-skinned face
not recognized by AI



white theater mask
recognized by AI

Dr. Joy Buolamwini uncovers racial bias in facial recognition tools (2018)



Data

Risk:
Algorithmic Bias

How are we mitigating this risk?

Data Governance

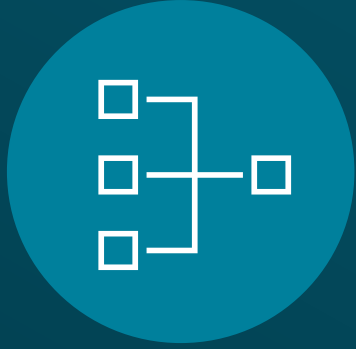
- Data Governance Policy
- AI Readiness for Data

Trained Staff

- Data Upskilling Program
- AI Upskilling Program

Reliable Processes and Technology

- Testing before deployment
- Vendor disclosure
- Community engagement

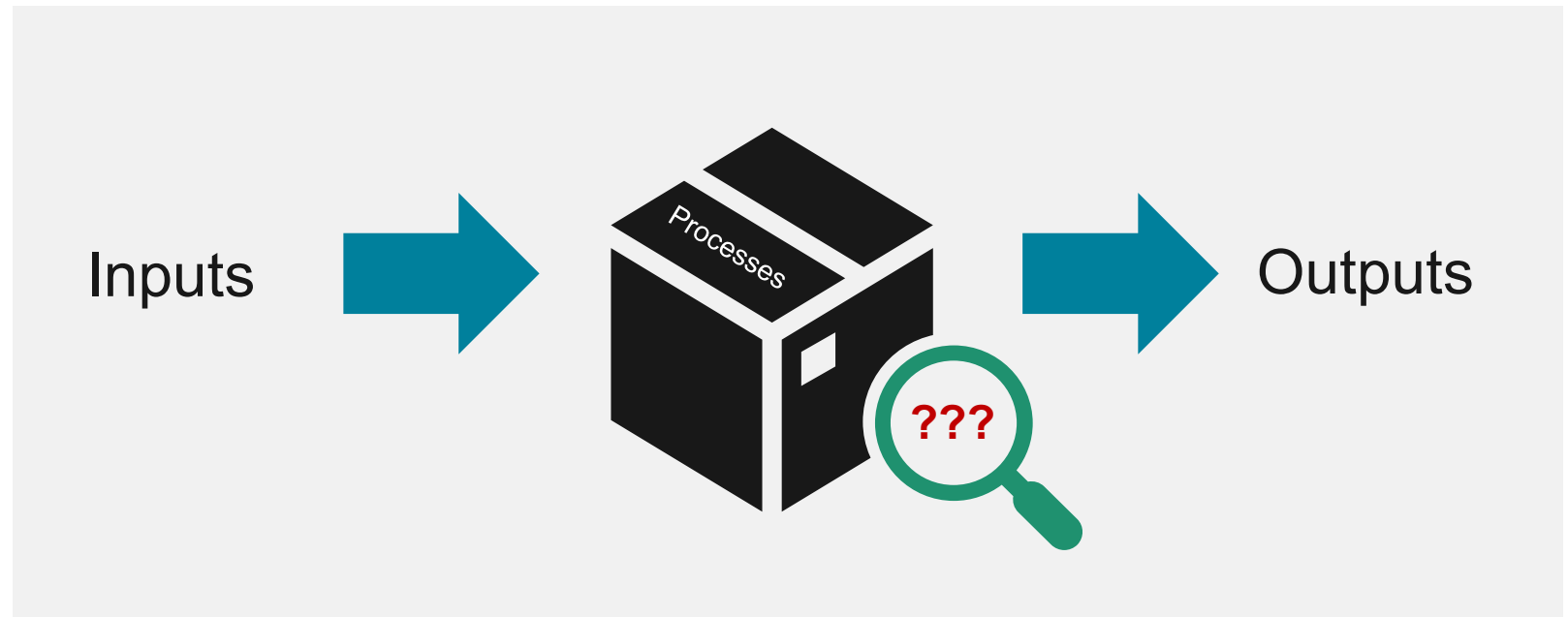


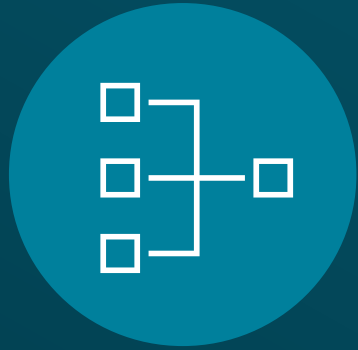
Algorithm

Risk:
Lack of transparency

The **Black Box** Problem

We see the inputs and outputs, but the processes in between are hidden.





Algorithm

Risk:
Lack of Transparency

How are we mitigating this risk?

AI FactSheet

Provided by vendors

Documents the technical details of AI system

Ensures transparency of AI systems

AI FactSheet for Third Party Systems

Please provide details regarding your Artificial Intelligence (AI) product by filling out the FactSheet¹ template below. This information will be kept in the GovAI Coalition vendor registry, and may be made publicly available. You can find an example of a completed FactSheet on page 4.

AI FactSheet

Vendor Name	
System Name	
Overview	Brief summary of the AI system.
Purpose	What function does the AI system perform, and for what purpose? If the system performs multiple functions, list each discretely and reference below. For features that are configurable, please describe all configuration options and default settings.
Intended Domain	What domain is the AI system intended to be applied in?
Training Data	How was the AI system trained? What data was used? How often is data added to the training set? Was all training data legally obtained and its use fully licensed?
Test Data	What data was used to test system performance? Under what conditions has the system been tested?
Model Information	General description of the model(s) used (e.g., large language model, transformer, deep learning, supervised learning, built on an existing open source model, computer vision)
Update procedure	In general, how often are the models updated for users? Will the user have a choice in moving to the updated model or staying on the current model? What documentation is available for new versions of the model?
Inputs and Outputs	What are the inputs to the AI system? What are its outputs? What interfaces and integrations are supported?
Performance Metrics	What are the performance metrics? What is your current level of performance on these metrics? How can the user monitor performance in the deployment environment?

¹ The FactSheet template is heavily inspired by the IBM Research [AI FactSheets 360 project](#).



Real-World Application

Risk:
Inaccurate Outputs

AUTONOMOUS CARS / TRANSP0 / GM

Cruise is recalling 950 driverless cars after one of its vehicles ran over a pedestrian /

It's not a physical recall but, rather, an over-the-air software update that will ensure that future Cruise vehicles remain stationary if a pedestrian gets pinned under one of its vehicles.

By [Andrew J. Hawkins](#), transportation editor with 10+ years of experience in transportation, and aviation. His work has appeared in The New York Times, The Washington Post, and other major publications.

Nov 8, 2023, 6:32 AM PST

Air Canada must honor refund policy invented by airline's chatbot

Air Canada appears to have quietly killed its costly chatbot support.

[ASHLEY BELANGER](#) - FEB 16, 2024 9:12 AM | 264

News

NYC's AI Chatbot Tells Businesses to Break the Law

The Microsoft-powered bot says bosses can take workers' tips and that landlords can discriminate based on source of income

By [Colin Lecher](#)

March 29, 2024 06:00 ET



Real-World Application

Risk:
Inaccurate Outputs

How are we mitigating this risk?

Field Testing

We learn and adapt by testing or piloting AI systems before fully deploying in the real-world to ensure effectiveness

SAN JOSE

San Jose to test gunshot detection technology

 by Carly Wipf



Annual Data Usage Report – Gunshot Detection Technology
May 2024

City of San José

Annual Data Usage Report for Gunshot Detection Technology
City of San José
January – December 2023

Owning department(s): San José Police Department
Department owner: Deputy Chief, Executive Officer

Trailblazing the Digital Privacy Space

WIRED

June 25, 2024

The Mystery of AI Gunshot-Detection Accuracy Is Finally Unraveling

“ San José, which has taken a leading role in defining responsible government use of AI systems, appears to be the only city that requires its police department to disclose accuracy data for its gunshot detection system. ”

Responsible AI Governance Program

Policy

- AI Policy
- AI Policy Manual
- Generative AI Guidelines
- Data Usage Protocols
- AI Meeting Notes Guidelines

Processes

- AI Review
 - Algorithmic Impact Assessment Form
 - AI Factsheet
- AI Standards and Requirements for Vendors
- Annual Usage Reports

People

- Community Engagement
- Digital Privacy Office
- AI Working Group
- Digital Privacy Advisory Taskforce
- GovAI Coalition

Who do you contact?

San José Digital Privacy Team at digitalprivacy@sanjoseca.gov

The City's Administrative AI Policy governs the use of AI systems

- Applies to all AI used by or on behalf of City
- Guiding Principles for responsible AI
- Roles and responsibilities surrounding AI systems
- AI Review requirements for AI procurements
- Prohibited uses of AI systems
- Sunset procedures for AI systems
- Policy enforcement

Artificial Intelligence (AI) Policy

1.7.12

PURPOSE

This policy establishes a governance structure that allows the City of San José (hereafter referred to as "City") to utilize Artificial Intelligence (AI) and AI systems (systems) while providing the necessary safeguards for purposeful and responsible use.

The key objectives of the AI Policy are to:

- Provide guidance that is clear, easy to follow, and supports decision-making for the staff, interns, consultants, contractors, partners, and volunteers who may be purchasing, configuring, developing, using, maintaining, or leveraging AI to provide services to the City;
- Ensure that the use of AI systems adheres to the Guiding Principles with regard to how systems are purchased, configured, developed, operated, or maintained;
- Define roles and responsibilities related to the usage of AI;
- Establish and maintain processes to assess and manage risks presented by AI;
- Align the governance of AI with existing data governance, security, and privacy measures in accordance with the City's [Information and Systems Security Policy](#) and City Council's [Digital Privacy Policy](#);
- Define prohibited uses of AI systems;
- Establish "sunset" procedures to safely retire systems that no longer meet the needs of the City; and
- Define how AI may be used for legitimate purposes in accordance with applicable local, state, and federal laws, and existing agency policies.

AI systems and the data contained therein will be purchased, configured, developed, operated, and maintained using the [City's AI Handbook](#), which will be managed by the Chief Information Officer (CIO).

SCOPE

This policy applies to:

1. All systems deployed by the City; and
2. Staff, interns, consultants, contractors, partners, and volunteers who may be purchasing, configuring, developing, using, or maintaining the AI or who may be leveraging systems to provide services to the City (collectively referred to as "users").

GUIDING PRINCIPLES FOR RESPONSIBLE AI SYSTEMS

These principles describe the City's values with regard to how AI systems are purchased, configured, developed, used, or maintained.

1. **Effectiveness:** Systems are reliable, meet their objectives, and deliver precise and

Responsible Use of AI

Acceptable Uses

Follows the City's Guiding Principles

- Designed to improve quality of life
- Expand accessibility for residents
- Enhance City services
- Respects residents' privacy

Prohibited Uses

As outlined in the City's AI Policy

- Real-time and covert biometric identification
- Emotion analysis
- Fully automated decisions
- Social scoring
- Cognitive behavioral manipulation

Leading community engagement to guide responsible use of AI

The Digital Privacy Team is actively **educating** and **engaging** San José residents on technology initiatives.



Education

- ▶ AI 101
- ▶ Deepfakes
- ▶ AI voice-cloning scams
- ▶ How to use ChatGPT



Engagement

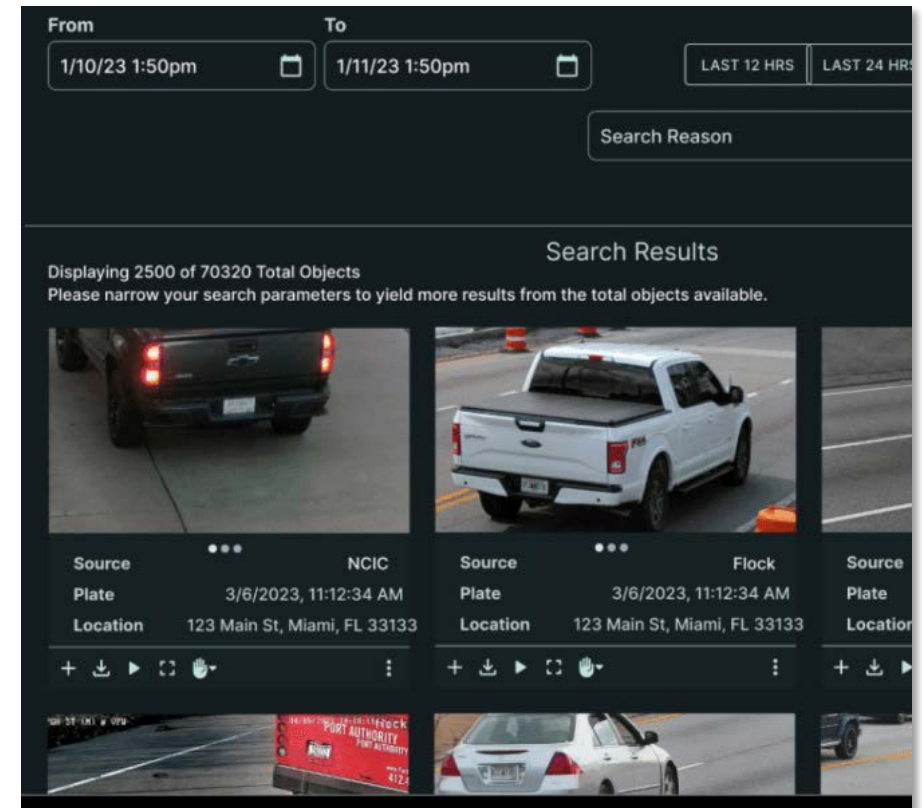
- ▶ Interactive sessions
- ▶ Advisory Taskforce
- ▶ Feedback on technology initiatives
- ▶ Next step: Building a resident advisory board

Note: "Advisory Taskforce" refers to the Digital Privacy Advisory Taskforce

AI in the City: Navigating use cases for high value

Deter Crime with Automated License Plate Reader (ALPR)

- ALPR assisted with solving **31+** notable criminal investigations within **four** months (robberies, stolen vehicles, hit-and-runs, homicides, and shootings)
- Indispensable and widely used tool for Special Operations, the Bureau of Investigations, the Bureau of Field Operations, and the Air Support Unit



167,014 license plates in active investigations detected in 2023

Road Safety: Leverage AI to Detect Issues





Proactive Services
Address issues before they are reported

Your Illegal Dumping Report


Illegal dumping includes large amounts of garbage and junk left on City of San Jose streets or sidewalks.

Add a Photo*
Help us find it faster.
Select any type of image format

 [tag file here or](#)
[choose from folder](#)

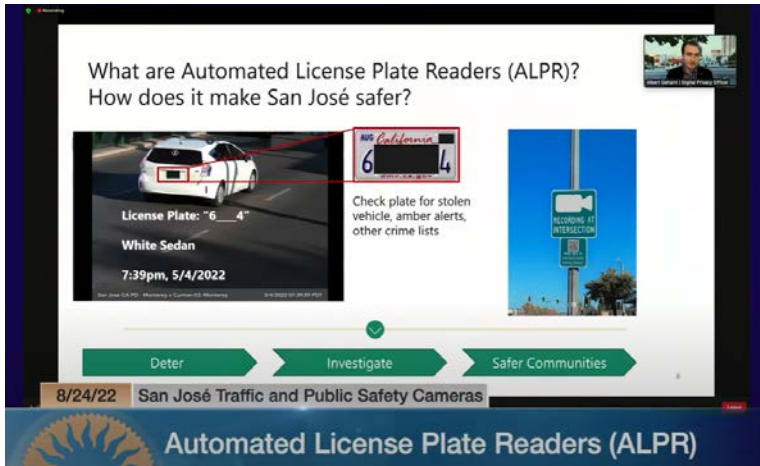
 (Max 10 MB attachments allowed)

Where is it?*
Search location and/or drag red pin below

Search (required) 

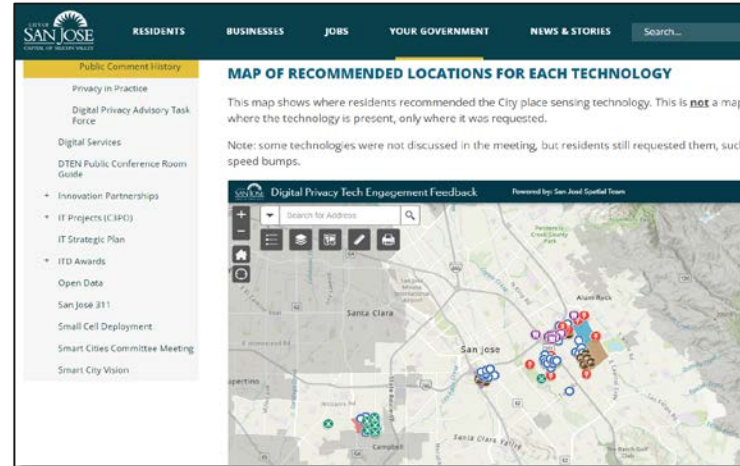
Automatic feed to SJ311

Road Safety Conditions Pilot: Phase One



Digital Privacy Protections

- Identifying information are blurred including faces, out-of-scope license plates, and home addresses.
- Need more testing to ensure AI doesn't develop biases.



Accuracy of Detection

- Phase One has shown AI can detect potholes accurately.
- A more diverse test database is necessary to confirm accuracy of trash and road conditions.



Output to Increase City Services

- Detection shows promise to make City services more proactive to resolve road conditions.
- The City continues to assess other service areas.

Road Safety Conditions Pilot - Phase Two



Implementing privacy protection



Partnering with and funded by
Toyota Mobility Foundation



RFI for vendor collaboration



Regular footage collection with two street sweepers
and four cameras

Support from the City and Beyond

GovAI Coalition

Founded by the City of San José in November 2023

Mission

Empower public sector entities to harness the potential of AI for the public good

Helped the City ensure responsible and effective use of AI in San José

- Recognized as a national leader in AI policies and innovation
- Over 150 agencies accepted the Coalition's Open Letter, endorsing AI principles
- Collective best work was incorporated in San José's program



SJ leads the GovAI Coalition of 400 agencies committed to responsible AI



As of September 2024

- ▶ Over 400 public agencies
- ▶ Over 1,200 members including:
 - ▶ Mayors
 - ▶ City Managers
 - ▶ Directors, CIOs & CISO
 - ▶ Non-profits/NGOs
 - ▶ AI Vendors



The GovAI Coalition's deliverables are really an impressive set of practical resources.

GovAI Coalition member



GovAI Coalition

Founded by the
City of San José in
November 2023

Partnerships



- GovAI Coalition Board: TriMet, City of San Antonio, Colorado Dept of Revenue, City of San Diego, City of St. Paul, City of Long Beach
- White House Office of Science and Technology Policy (OSTP)
- Department of Homeland Security (DHS)
- California Governor's Office of Government Operations
- Administration for Children and Families (ACF)
- National Institute of Standards and Technology (NIST)
- San José State University (SJSU)
- Federal Trade Commission (FTC)
- California Privacy Protection Agency (CPPA)





GovAI
COALITION

government
technology

gt | CENTER FOR
PUBLIC
SECTOR AI

THE GOV **AI** COALITION
SUMMIT

December 4 - 5, 2024 | San José, CA

SOLD OUT

Date: December 4-5

Location: San Jose Convention Center

Purpose: Grow responsible and effective AI in the center of San José

500
Attendees

San José has received support to lead responsible AI in the public sector.

THE WHITE HOUSE

San José State University (SJSU), in partnership with the Knight Foundation, will supply over 300 local, city, county, and state governments with materials for the AI Civic and Social Good initiative. Additionally, SJSU is collaborating with the City of San José to train city government staff on ethical AI applications and frameworks and to **support the government AI coalition.**

SAN JOSÉ
spotlight

SUBSCRIBE

San Jose uses AI to streamline government

COMMUNITY ENGAGEMENT

Toyota Mobility Foundation Provides City of San Jose \$260,000 to Make City Streets Safer Using AI and Computer Vision

August 01, 2024



gt

government
technology

San Jose Leads on Safe, Responsible AI Collaboration

THE WALL STREET JOURNAL.

How San Jose Is Using AI to Improve Government Services

The California city has gotten an early glimpse at how artificial intelligence can make government more effective

AI

San Jose, Calif., forms nationwide government AI coalition

Leaders of the GovAI Coalition said they've already attracted more than 500 government officials from around the United States.

San Jose spearheads nationwide AI safety group

Summary

Takeaways



Intentional investments in AI initiatives has provided the City with more efficient and accessible services for residents.



Building trust among the community and City staff through technical education promotes inclusion and moves San José forward for everyone.



Responsible AI governance maximizes the benefits to residents while mitigating the potential risks.



By founding the GovAI Coalition, the City advanced its AI program while affirming its national leadership in responsible and effective use of AI.

Join Our Efforts!



Partner to promote safe and responsible use of AI



Invite us to engage with neighborhoods on City technology initiatives



Endorse policies that align with the GovAI Coalition's AI Guiding Principles

This work was made possible with the collaboration and support of the following City partners:

City Manager's Office
Mayor's Innovation Team
City Clerk's Office
Human Resources
Office of Employee
Relations
City Attorney's Office

City Council
Department of Transportation
Police Department
Human Resources
Parks, Recreation, and
Neighborhood Services
San José State University



Questions & Feedback

Council Study Session: City AI Initiatives and GovAI Coalition Summit Study Session

Information Technology Department

Khaled Tawfik, Chief Information Officer

Leila Doty, Privacy and AI Analyst

Namrata Batra Agrawal, Products & Projects Manager

Albert Gehami, Digital Privacy Officer

Angela Zhao, Privacy and AI Analyst

Arti Tangri, Equity through Data Lead