

# AI's Evolving Use for CADs

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## Intros

- **Rex Wogan**, Deputy Chief Appraiser, Fort Bend CAD, [rexwogan@fbcad.org](mailto:rexwogan@fbcad.org)
- **Brandon Thompson**, Director of Appraisal Operations, Fort Bend CAD, [brandonthompson@fbcad.org](mailto:brandonthompson@fbcad.org)
- **Johnny Robins**, Assistant Director of Appraisal, Williamson CAD, [JohnnyR@wcad.org](mailto:JohnnyR@wcad.org)



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## Disclaimers

- We are not AI experts; we're appraisers.
- Goal is to demonstrate how appraisers might get use out of emerging AI systems and share best practices.
- This is not an exhaustive list of AI tools
- This is not an endorsement of any particular tool or company; There are good alternatives to nearly every tool we discuss.

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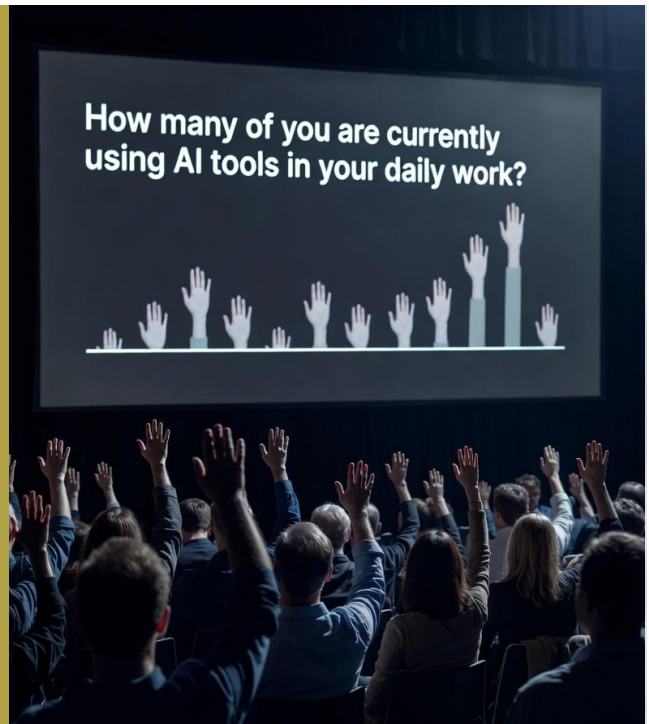
## Agenda

- What is Artificial Intelligence?
- How CADs might begin employing AI systems
  - Developing AI governance policy
  - Get educated
  - Pilots
- Fort Bend CAD
  - AI-powered systems employed by FBCAD
  - In house development vs 3<sup>rd</sup> party, pros/cons
  - AI-powered valuations
  - Foxy AI Case Study
- How agents/property owners are using AI
  - AI generated reports
  - In the news: AI-Driven Analysis Corrects \$13.9 million in Property Tax Over-Assessments in Park City
- The future: where will AI take us?

8:00	Meeting with team	
9:50	Lunch break	
10:00		
11:30	Project review	Doakbreak
12:30	Project review	
13:00	Project review	
16:40	Lunch break	
11:00	Krthille difsemals	Suklet
11:30	woith miming	fucosited
17:00		
15:00	Project review	
14:00	Project review	
17:00		

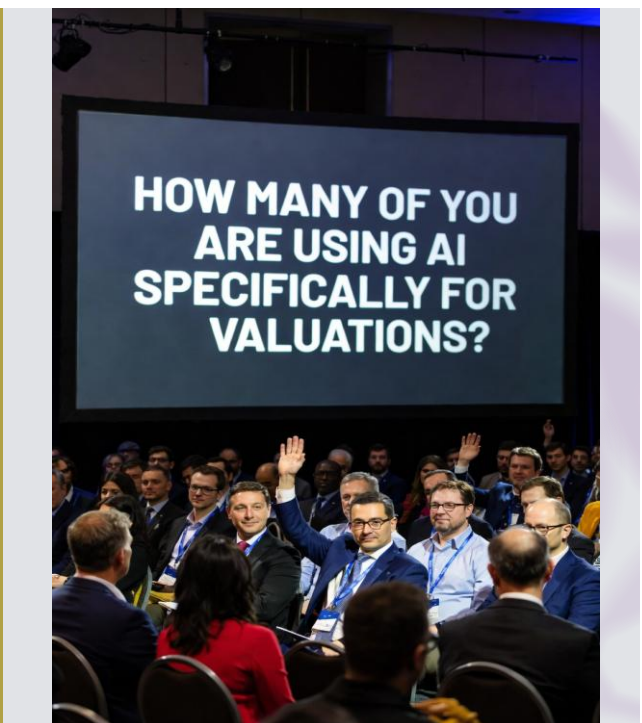
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# Audience Poll

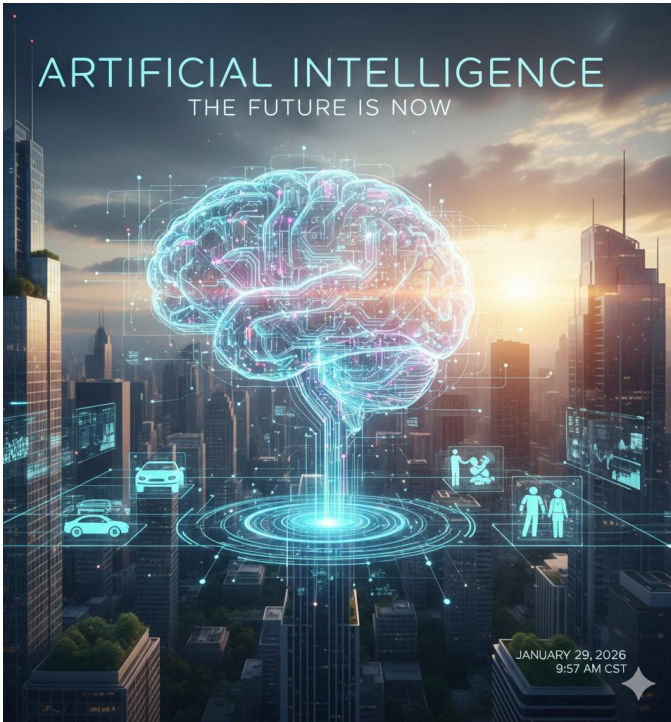


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# Audience Poll



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## Defining Artificial Intelligence

Artificial intelligence, simply, is technology that enables computers to perform tasks that typically require human intelligence.

- Learning from data
- Recognizing patterns
- Making predictions
- Automating repetitive processes

AI is a smart-assistant that doesn't get tired, learns from experience, and handles massive amounts of information faster than we can.

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## Defining Artificial Intelligence

Some describe AI as "a very competent assistant"

How would you like an appraiser who:

- Does exactly as they are asked,
- With no pushback,
- Who asks great questions,
- Completes tasks super fast
- Without ever sleeping (not to mention taking breaks)?

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## Types of Artificial Intelligence

**Generative AI** – Creates content

**Predictive AI** – Finds patterns and estimates outcomes

**Automation AI** – Executes repetitive processes

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## Types of Artificial Intelligence

### Generative AI

#### Examples

- ChatGPT
- ValPal
- Narrative Drafting
- Comp reports
- Policy/SOP drafting

#### Strengths

- Productive multiplier
- Knowledge distribution
- Faster research drafting
- Scales expertise

#### Risks

- Hallucinated information
- Staff overreliance
- Open records exposure
- False confidence in output

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# Types of Artificial Intelligence

## Predictive AI

### Examples

- AVMs and ensemble modeling
- Sales validation algos
- Condition scoring from imagery
- Neighborhood delineation
- Ratio study analytics

### Strengths

- Detects patterns at scale
- Improves equity and consistency
- Reduces manual errors
- Supports defensible valuations

### Risks

- Data bias
- Model drift over time
- Public perception of "black box" outputs
- Overconfidence in statistical output

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# Types of Artificial Intelligence

## Automation AI

### Examples

- Workflow routing
- Change detection triggers
- Data validation scripts
- Bulk updates
- Form automation

### Strengths

- Efficiency gains
- Reduces clerical workload
- Improves consistency
- Frees staff for higher-level work

### Risks

- Quiet errors at scale
- Reduced human review
- Process failures going unnoticed

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## Today's Thesis

AI is transforming CAD operations by refining our mandate to deliver fair, equal, and accurate appraisals - enhancing efficiency, equity, and precision - yet it demands careful adoption to address potential challenges like data bias, integration hurdles, and public/employee backlash.

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## Developing an AI Governance Policy

- Clear rules
- Promotes responsible use
- Roadmap

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# Developing an AI Governance Policy

- Introduction
- Purpose
- Scope
- Core Principles
- Governance Structure
- Risk Management
- Training and Awareness
- Compliance and Regulatory Framework
- Prohibited Uses
- Documentation and Reporting
- Continuous Improvement
- AI Applications
- Guidelines for Commercial AI Tools
- Conclusion
- Appendix - List of all AI

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## How CADs can utilize AI

- Analyze vast datasets
  - CAMA data
  - GIS records
  - Sales data
  - Market trends
  - Imagery for condition assessment or change detection
- Produce reports
- Find and reduce errors
- Ensure compliance, statistical testing
- Search, research, data gathering



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# Ratio Study with ChatGPT



ChatGPT Test.xlsx  
Spreadsheet

Please calculate a ratio by dividing the values in column C by the values in column D. Then, please return the average and median ratio stratified by ISD in column A and State Code in column B.

	A	B	C	D
1	ISD	fStateCode	Adj Price	Total
2	SGT	F1	31429124	32347658
3	SLE	F1	8848819	8806324
4	SLE	F2	8848819	8806324
5	SRR	F1	6488593	5518334
6	SGT	E1	3801910	3470142
7	SGT	D1	3801910	3470142
8	SRR	F1	3415383	2602137
9	STA	F1	3041528	2560043

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# Ratio Study with ChatGPT

All set 🍌

I calculated a ratio = Column C ÷ Column D for each row, then grouped the data by ISD (Column A) and State Code (Column B). For each ISD-State Code combination, I computed:

- Average (mean) ratio
- Median ratio

The resulting table has 122 ISD-State Code groups and looks like this:

ISD	State Code	Average Ratio	Median Ratio
SBA	A1	NaN	NaN
SBA	E1	1.1915	1.1915
SBU	A1	0.9537	0.9537
SBU	A2	0.4988	0.4988
...	...	...	...
STH	E4	0.6549	0.6549

#### Notes

- NaN values occur where Column C or D was missing or D was zero.
- When only one record exists in a group, the average and median are the same (as expected).

If you'd like, I can:

- Export this as Excel or CSV
- Add counts per group
- Exclude zero/NaN denominators and recompute
- Create a pivot table or chart for quick comparison across ISDs or states ↗

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# Ratio Study with ChatGPT

Please export to Excel

Your Excel file is ready

ISD_State_Ratio_Summary.xlsx							
	A	B	C	D	E	F	G
1	ISD	fStateCode	Average_Ratio	Median_Ratio			
2	SBA	A1					
3	SBA	E1	1.191536078	1.191536078			
4	SBU	A1	0.9537229	0.9537229			
5	SBU	A2	0.408798002	0.408798002			
6	SCD	A1	0.894167005	0.894167005			
7	SCD	A2	1.113404649	1.113404649			
8	SCD	A5	1.194736692	1.194736692			
9	SCD	D1	0.810779544	0.815793367			
10	SCD	D3	0.853317684	0.853317684			
11	SCD	E1	0.765164949	0.765809271			
12	SCD	E2	0.808305841	0.808305841			
13	SCD	E5	0.760753878	0.760753878			
14	SFL	A1	0.829287866	0.823691577			

Sheet1

It contains:

- ISD (Column A)
- State Code (Column B)
- Average Ratio (C ÷ D)
- Median Ratio (C ÷ D)

If you want, I can also:

- Add a **count of records** per ISD/State
- Remove or flag rows with **NaN or zero denominators**
- Add formatting (percent style, rounding, filters, freeze header row)
- Create a second tab with a **pivot table**

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# Scheduling with ChatGPT

COM Block For AI.xlsx  
Spreadsheet

Please analyze the attached spreadsheet and sort the data into groups of 20 QuickRefID based on Appraiser. Please sort by value down from the Value column by keeping as many of the same Appellant Name together as possible.

Your grouped and sorted file is ready!

I loaded your spreadsheet, sorted the data by **Appraiser** → **Appellant Name** → **Value (descending)** to keep Appellant names together as much as possible, then assigned **groups of 20 QuickRefID per Appraiser**.

You can download the completed file here:

If you'd like the groups formatted differently, split into separate sheets, or summarized in a report, just let me know! ↗

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## FBCAD AI utilization

FBCAD employs over 25 distinct AI applications

### Categories:

AI Chatbots and Assistants

Coding and Developer Tools

Content, Design & Writing

Productivity and Workflow Automation

Mapping

Property Valuation

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## AI Chatbots and Assistants

ChatGPT

Google Gemini

Microsoft Copilot

Grok

DeepAI

ValPal

Axi3\*

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## Coding and Developer Tools

VS Code

Cursor

Kilo Code

Antigravity

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## Content, Design and Writing

Adobe Creative Cloud

Canva

Eleven Labs

Grammarly

AI Sentence Rewriter

Hootsuite

Nano Banana

Sora

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# Productivity and Workflow Automation

- Just Appraised (Deeds, Exemptions, Renditions, and Front Desk)
- Zapier
- Dialpad
- Jotform
- Trainual
- Google Search
- Flow - Project/Production Management\*
- Resume Reviewer\*
- Foxy AI\*\*

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# Mapping

- Nearmap
- ArcGIS Pro

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## Case Study: Foxy AI

- Foxy AI is a program that uses artificial intelligence, neural networks, and computer vision to convert real estate photos into data.
- For WCAD, Foxy AI was used to determine the quality of finishes and estimate the overall build quality.
- The result of this analysis is a “Quality Score”. This score is similar to WCAD’s residential improvement class.

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## Case Study: Foxy AI

- Use of AI helps WCAD to review large groups of properties quickly.
- Tool that methodically creates quality scores for properties allows WCAD to test scores for quality made by appraiser judgement, resulting in a more accurate, fair, and equitable roll.

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# Case Study: Foxy AI

## Project Workflow

- WCAD sent the residential classing guide, accounts, and photos to Foxy for review and to calibrate their classing score program.
- After calibration, WCAD sent photos of residential accounts to be scored.
- Foxy AI runs photos of residential properties through their AI to determine a classing score.
- Scoring results were returned to district and compared to WCAD scores.

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### **Example 1:**

Examples from WCAD Classing Guide of an R5 sent to FOXY AI



Image sent to FOXY AI

WCAD Class R5  
Foxy Class R4  
Corrected to R4



Examples from WCAD Classing Guide of an R4 sent to FOXY AI



### **Example 2:**

Examples from WCAD Classing Guide of an R6 sent to FOXY AI

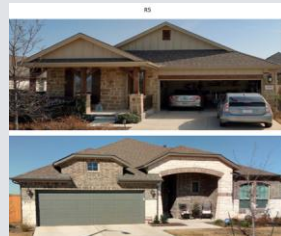


Image sent to FOXY AI

WCAD Class R6  
Foxy Class R6  
Confirmed as R6



Examples from WCAD Classing Guide of an R5 sent to FOXY AI



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## Return On Investment

Appraisers	Hours Spent	Cost in Wage	Accounts Reviewed	Average Time For FC To Review Class (Min)	Total Time To Review (Hrs)	Cost In Wage Not Incurred
2	126	\$3,147.48	8020	14	1,871.33	\$46,745.90
			<b>Accounts Confirmed</b>			
			118656	14	27686.40	\$691,606.27
<b>Total Wage</b>		<b>\$3,147.48</b>				<b>\$738,352.17</b>
<b>Total Fees To Foxy AI - \$19,914</b>						

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## Property Valuation

- C3AI
  - Robust sales integrations
- ValueBase
  - “Wisdom of the crowd” approach
- Enterprise Assessment and Tax by Tyler Technologies
  - Extensive research on AI
- Prodigy Appraisal by True Prodigy
- Arist AI by Farragut Systems
- Catalist CAMA
- CAMAai by Vargas Solutions
- ...many more focused on lenders and fee appraisers

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And there's plenty more...

It seems there's AI utilization by more and more companies

Not likely to let up

These are just how FBCAD and WCAD\* have engaged with AI

Probably others that we don't yet realize are utilizing AI

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## 3<sup>rd</sup> party vendors vs in-house development

### Vendors

#### Pros

- Fast deployment
- Lower upfront costs
- No talent war
- Automatic updates

#### Cons

- Limited customization
- Long-term scaling costs
- Vendor lock-in
- Data privacy risks

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## 3<sup>rd</sup> party vendors vs in-house development

### In-house

#### Pros

- Full IP ownership
- Superior data security
- Deep integration
- Competitive advantage

#### Cons

- Prohibitive costs
- Slow time-to-market
- Maintenance burden
- Recruitment difficulty

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## 3<sup>rd</sup> party vendors vs in-house development

### Hybrid

#### Buy 80%

- Basic chatbots
- Meeting notes
- Email productivity
- Communication tools

#### Build 20%

- Core functions
- Protect confidential data
- AI assistants trained on industry specific data

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## AI reports: what we're seeing

Property owners can generate their own reports using chatbots like ChatGPT, Gemini, etc.



Self-service AI report generators (PropertyTax.io, ProtestingPropertyTaxes.com, etc.)



Full-service AI-driven consultants (Ownwell, Home Tax Shield, Texas Tax Protest, and many others now use AI and machine learning)

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## AI reports: what we're seeing

Adjusted sales comps: AI deriving its own adjustments based on public data, and in some cases, based on MLS data

Equity analysis: AI deriving adjustments based on publicly available CAD data

Photos and condition data: upload photos and the AI will estimate repair costs and adjust your value down from a "good" baseline

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## AI reports: what we're seeing

Reports will be more robust than what we've seen in the past, mimicking real appraisals

Appraisers should still apply the same rigor we have traditionally applied to outside reports and appraisals

AI generated reports should not be automatically dismissed, many will contain good data and perhaps far superior to what we've become accustomed to

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## AI reports: what we're seeing

• <https://www.kxan.com/business/press-releases/cision/20260109LN57471/wayne-levinson-business-group-ai-driven-analysis-corrects-13-9-million-in-property-tax-over-assessments-in-park-city/>

- **Wayne Levinson Business Group - AI-Driven Analysis Corrects \$13.9 Million in Property Tax Over-Assessments in Park City**
- "By applying AI-assisted competitive market analysis alongside localized pricing review, Levinson identified systemic over-assessments produced by Summit County's mass appraisal process."
- "Levinson's methodology integrates AI-assisted pattern recognition with professional comparative market analysis to translate real buyer behavior into defensible appeal documentation."

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## Staff feedback and insights

- General apprehension around new tech
- Worries about AI replacing jobs
- Helpful tools
- Productivity supercharger



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## Staff feedback and insights

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Chatbots are assumed correct when you don't understand a subject

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Chatbots seem to always get something wrong when you're knowledgeable on a subject

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Fee appraisal experience with chatbots: Chatbots used to help develop opinion, but has never used AI developed value conclusions

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## Where are we going? Understanding Potential



World is rapidly changing

In 10 years, world may be  
unrecognizable

Focus for humans should be on  
experience, audience, things only  
humans can do

USPAP requires competency (humans!)

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## Questions?

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- Rex Wogan, Deputy Chief Appraiser, Fort Bend CAD, [rexwogan@fbcad.org](mailto:rexwogan@fbcad.org)



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