

What is AI and How Using AI Can Support IT Finance Departments

May 7, 2025 ITFMA 2025 Conference Amy Nelson, Director of IT Finance and HR

Topics for Today



- What is AI and how does it work
- How can we use it today
- What is trending for the future



What is AI

Artificial Intelligence (AI) is the ability of computers and machines to perform tasks that usually require human intelligence.





Definitions

Algorithm – set of rules computer uses to accomplish a task

Natural Language Processing (NLP) - focus on human/computer interactions

Generative Pre-trained Transformer (GPT) – language model

Machine Learning (ML) – allow computers to learn using algorithms

Prompt – an instruction you give to guide what Al generates



Ethics

Ethical considerations: privacy, bias, job displacement, misuse of tech

GENAI RETAINS ALL OF THE BIASES OF THE INFORMATION IT INTAKES.

IF THE TRAINING DATA FOR THE AI INCLUDES BIAS, THE RESULTS WILL ALSO BE BIASED.

CAN PERPETUATE MISINFORMATION THAT IS INACCURATE, MISLEADING, OR HARMFUL.

AI OUTPUTS CAN BE INACCURATE AND MUST BE FACT-CHECKED.

IT IS NOT YET CLEAR WHO OWNS OR IS ACCOUNTABLE FOR OUTPUTS OR PROMPTS.

ACCESS TO TECHNOLOGY NEEDED AND AI LITERACY REQUIRE INVESTMENT SOME CANNOT AFFORD.



How Does it Work

- Al systems learn from data that enables them to handle complex problems and simple repetitive tasks, improving how they respond over time.
- Generative AI learns to identify patterns and create new variations based on those patterns.





How Can We Use it Today

Al is used in a variety of ways across different fields and industries.





AI is All Around Us

















Students, Faculty, and Staff Use AI Every Day

I Use AI: How the University of Michigan is Using Artificial Intelligence

<u>U-M Generative AI Use Cases</u>



AI Tools

<u>U-M AI Tools</u> offering a generative AI platform

ChatGPT Open AI chatbot using NLP

<u>U-M GPT</u> ITS AI service to support faculty, staff, and students



Simple Ways to Leverage AI

IT finance teams can use AI in several simple ways. For example:

- Idea generation
- Composing/reviewing emails
- Technology terms and definitions
- Procurement questions
- Summarize new policies



How Do I Build the Best Prompts

Constructive, effective prompts can significantly enhance the quality of the responses.

- Be clear and specific: Avoid Ambiguity & Request Detail
- Frame your context: Provide Background & Use Specific Format
- Experiment with iterative questions: Build a Conversation
- Limit potential biases: Neutral Language
- Iterate and refine: Analyze and Adapt



Idea Generation

 Context: Plan an ice breaker for team retreat.

 <u>U-M GPT Prompt:</u> what can i do for a 5-person team ice breaker

Result: ...



Composing Emails

- Context: Email Directors about a 1% budget cut.
- <u>U-M GPT Prompt:</u> draft an email to directors about a 1% budget cut for next year and ask them to respond with a plan
- Result: ...



Reviewing Emails

- Context: Email budget managers regarding the budget building process.
- U-M GPT Prompt: review my email to budget managers "[enter email text here]"
- Result: ...



Good afternoon,

This email marks the beginning of the budgetbuilding process. We are asking departments to submit funding requests that require funding for FY26.

Provide a justification for the need, considering the environment of highly constrained resources. Ensure your requests align with the ITS strategy and reflect the necessity of the funding.

Our team will pre-populate the merit program and SW/HW contract increases.

For any requested items, please complete a Request for Funding Template and submit them by Friday, October 18, 2024.

If you have any questions or need assistance with completing the template, feel free to contact me.

Best regards,

Good afternoon,

As we begin the budget-building process for FY26, we are reaching out to request funding proposals from each department. Please submit any funding requests for the upcoming fiscal year.

When submitting requests, provide a thorough justification for each item, taking into account our environment of highly constrained resources. It's essential that all requests align with the ITS strategy and demonstrate the necessity of the funding.

Our team will handle the pre-population of the merit program and SW/HW contract increases.

For all other requests, please complete the "Request for Funding Template" and submit it by Friday, October 18, 2024.

If you have any questions or need assistance with the template, please feel free to contact me.

Best regards,



Technology Terms

 Context: Upcoming meeting to discuss hosting software onprem versus the cloud.

 <u>U-M GPT Prompt:</u> what is onprem versus the cloud mean

• Result: ...



Technology Definitions

 Context: Research storage team talks about CUI.

<u>U-M GPT Prompt:</u> what is CUI

• Result: ...



Procurement Questions: Available Services

- Context: Looking to add a deep storage service.
- <u>U-M GPT Prompt:</u> who provides deep storage services
- Result: ...



Procurement Questions: Vendor Specific

- Context: Purchasing request comes through asking for a new vendor.
- <u>U-M GPT Prompt:</u> who is the vendor crowdstrike

Result: ...



Summarize Policies

 Context: New policy comes out that needs to be communicated to staff.

 U-M GPT Prompt: summarize this policy "[enter policy text here]" and create an email to staff

• Result: ...



SUMMARY

The policy supports an adaptable work environment focused on balancing employee needs with the university's mission, while managing risk. Key guidelines are:

Remote Work Agreement: A formal remote work agreement must be on file.

Employee Responsibilities: Follow approval processes and provide necessary details for remote work requests.

Unit Responsibilities: Ensure compliance with all policies and laws and facilitate necessary agreements.

Central Administration Responsibilities: Provide necessary approvals and guidance.

Dear [Staff/Team Members],

Good afternoon. We're reaching out to update you on the revised remote work policy, which supports flexible work environments in line with our educational, research, and service missions.

Key Points of the Policy

Work Arrangements: Unit leadership determines work modes, requiring approval for hybrid or remote work from the unit.

Agreements: A remote work agreement is mandatory.

Responsibilities

Employees: Follow approval processes and provide necessary details for remote work.

Units: Ensure compliance with laws and maintain proper documentation.

We appreciate your cooperation and commitment to making our adaptable work environment successful. If you have any questions or require further clarification, please do not hesitate to reach out.

Best regards,



What is Trending for the Future

Advancements rapidly increasing and expected to transform everyday life.



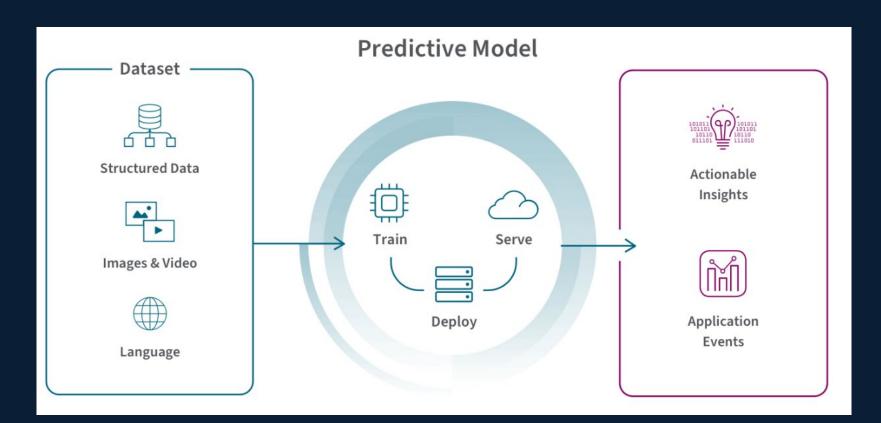


AI Helping Data-Driven Business Decisions

In finance, AI can analyze vast amounts of financial data, detect patterns, and make data-driven decisions.







Predictive Analytics

 Optimization of inventory for retail services or warehouse stocks.

 Equipment maintenance schedules.

 Quickly analyze large datasets to provide an in-depth forecast report (i.e., Excel files, pdfs).



ChatGPT Prompt: review my forecast for june 30 based on actuals through december 31

													Projected		
	Actual	Actual	Actual	Actual	Actual	Actual	Forecast	Forecast	Forecast	Forecast	Forecast	Forecast	Total	Final Budget	Variance
	July	August	September	October	November	December	January	February	March	April	May	June	FY 2025	FY 2025	
Beginning Fund Balance													5,360,437	5,360,437	0
Revenue															
Appropriations	48,232,254	0	0	0	0	0	0	0	0	0	0	0	48,232,254	49,232,251	(999,997)
Investment Transactions	69,681	(7,795)	(8,703)	65,949	(11,045)	(13,926)	61,469	12,407	22,407	61,469	22,407	12,407	286,729	287,510	(781)
Gifts and Grants	0	49,663	0	0	0	0	0	0	0	0	0	0	49,663	48,883	780
External and Other	1,092,367	1,449,028	1,227,249	427,315	1,076,287	808,265	856,940	1,374,417	1,451,324	1,461,203	1,505,579	1,016,153	13,746,127	13,743,490	2,637
Recharge Revenue	5,026,589	5,164,173	5,711,389	4,709,117	5,395,303	4,945,210	5,187,734	4,933,595	5,353,740	12,209,339	5,710,610	5,169,126	69,515,925	69,513,370	2,555
Total Revenue	54,420,891	6,655,069	6,929,936	5,202,381	6,460,545	5,739,548	6,106,143	6,320,420	6,827,471	13,732,010	7,238,596	6,197,686	131,830,698	132,825,504	(994,806)
Compensation & Benefits															
Base Salaries	4,958,738	4,952,328	4,722,844	4,802,910	4,879,462	4,750,829	4,709,689	4,569,580	4,550,641	4,530,851	4,532,316	4,532,316	56,492,504	57,274,869	782,365
Non-Base Compensation	(549,770)	45,697	57,327	52,412	32,494	22,152	29,168	29,168	33,128	29,168	29,168	754,235	564,348	565,672	1,324
Temp Salaries	128,702	132,467	142,377	89,799	92,472	82,411	100,877	100,416	117,074	101,107	109,707	115,614	1,313,019	1,312,695	(324)
Total Benefits	1,367,333	1,359,542	1,369,154	1,280,709	1,312,658	1,326,579	1,388,488	1,401,763	1,497,538	1,420,228	1,420,482	1,420,481	16,564,955	16,801,546	236,591
Subtotal Compensation & Benefits	5,905,003	6,490,034	6,291,702	6,225,831	6,317,085	6,181,971	6,228,222	6,100,927	6,198,381	6,081,353	6,091,672	6,822,646	74,934,826	75,954,782	1,019,956
Cost of Goods Sold	4 700 005	2.026.313	4 707 400	4.470.400	4 700 040	4 500 705	4 400 000	000.070	4.040.450	4.040.500	4 744 400	4.044.470	47,000,474	17,905,995	6.521
	1,736,835		1,767,166	1,176,168	1,723,649	1,593,765	1,493,000	960,870	1,019,452	1,049,583	1,741,199	1,611,476	17,899,474		
Furniture & Equipment	6,005	21,509	21,589	56,116	46,925	9,894	17,557	19,307	120,557	20,057	24,557	74,557	438,631	435,679	(2,952)
Software & Hardware Maintenance	523,188	328,166	1,314,609	349,350	911,673	1,857,873	867,881	835,335	2,342,010	434,953	1,303,719	5,098,890	16,167,650	17,150,389	982,739
Computing Services & Supplies	514,145 22,515	598,627	573,295	144,444 268,425	163,679 22,423	373,260 21,093	626,170	175,179 366,576	286,768 381,520	520,058 61,520	357,108 61,520	1,213,785 233,021	5,546,516	5,555,908 1,552,615	9,393 (4,954)
Computers, Copiers, Fax, Printers		13,469	46,469	370.166			59,020					721,840	1,557,569	5.094.968	3.268
Consulting and Contractors Overhead Recharge	543,816 33,557	410,094 26.419	423,466 20.695	23,557	276,272 23,557	376,195 24.851	287,512 50.174	322,314 54.144	419,011 54.144	423,689 54.144	517,325 54.144	54,146	5,091,700 473,534	481.491	7,956
Office Supplies, Printing, and Postage	93.977	141.199	110.504	143.058	103.061	184,400	145.650	107.085	105.310	98.097	91.577	83.577	1.407.497	1.407.910	413
Memberships, Dues and Subs	158,344	296,767	22,304	3,275	4,535	291.828	2.229	1,608	1,608	1,758	1,608	57,745	843,611	844,053	442
Training, Travel, and Hosting	50.800	45.831	52,735	100.681	68.506	110.414	100.576	102.830	100.330	102.330	109.330	277.553	1.221.916	1.223.179	1,263
Space and Transportation	196.322	197.181	194.834	200.081	199.620	261.422	193.086	193.086	193.086	193.086	185,157	187.657	2.394.616	2.395.830	1,203
Utilities	212.023	441.550	182.143	83.950	229.114	179.877	136.592	138.592	143.592	231.592	231.592	351.592	2,562,206	2,595,650	91
Communication and Network Fees	183,015	236,588	216,181	225,070	267,474	570,127	(37,070)	394,476	530,931	259,476	260,476	916,249	4.022.994	4,027,112	4,118
Plant & Building Expenses	33,850	58.290	181.710	99,499	157,309	104,757	106.825	106.825	107.825	106.825	106.825	213,524	1,384,065	1.391.007	6.942
Internal Rebill	(109,895)	(60,272)	(170,097)	(135,796)	(71,208)	(102,647)	(9.000)	(245,137)	(66,203)	(257,979)	(3,641,775)	(3.225.880)	(8,095,890)	(8.103.412)	(7,522)
Internal Rebill	262.083	(69.063)	(25.542)	(316,156)	(88.827)	(304.846)	(25,542)	(25,542)	(25,542)	(25.542)	(25.542)	(313.652)	(983,712)	(987,994)	(4,282)
ITS Use Charge	138,681	138,681	138,681	138,681	138,681	138,681	138,681	138,681	138,681	138,681	138,681	138,681	1,664,170	1,658,304	(5,866)
Other General Expenses	161,133	161,253	131.052	112.547	34,190	72.759	132,841	80.612	58.340	60.365	60,402	203,469	1,268,961	1,271,854	2,893
Subtotal - Other Expenses	4,760,394	5.012.602	5,201,793	3.043,117	4,210,634	5,763,703	4,286,182	3,726,840	5,911,419	3,472,692	1,577,902	7,898,229	54,865,508	55,867,186	1,001,678
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Total Expenses	10,665,396	11,502,636	11,493,495	9,268,948	10,527,719	11,945,673	10,514,404	9,827,767	12,109,800	9,554,045	7,669,574	14,720,875	129,800,334	131,821,968	2,021,634
Net Annual Change	43,755,495	(4,847,567)	(4,563,559)	(4,066,567)	(4,067,174)	(6,206,125)	(4,408,261)	(3,507,348)	(5,282,329)	4,177,965	(430,978)	(8,523,188)	2,030,364	1,003,536	1,026,828
Ending Fund Balance													7,390,801	6,363,973	1,026,828

Automating Routine Tasks

- AR: Anticipate payments and predict customer behavior based on payment history.
- AP: Invoice coding and PO matching predicted based on historical data.



Problem

The Shared Services Center processes approximately 300,000 invoices annually. Previously, this process relied on a template-based system. With the sunsetting of this older technology, a new Al driven solution was needed.

Outcome/Impact

The transition to a U-M GPT powered invoice processing system has significantly improved workflow efficiency and accuracy:

- > Higher Automation Rate
- > Faster Processing Times
- Streamlined Payments



Risk Management

- Reduces human error and enforces compliance with standards.
- Detect irregularities in financial transactions.



ChatGPT Prompt: review my billing file for errors or missing information

Card Type													
ard	Short												oucher Comment
	Code 120862		0000831916			Departmental Reference Number SES MED	Item Description SES Virtual Machine	Mar-25	112.00	Unit Price	Merchandise Amount		Virtual Server
			0000031310				SES Virtual Machine	Mar-25	112.00	1			Virtual Server
			0000031916				SES Virtual Machine	Mar-25	140.00	1			Virtual Server
			0000031916				SES Virtual Machine	Mar-25	140.00	1			Virtual Server
			0000031310			SES ARC	SES Virtual Machine	Mar-25	84.00	1			Virtual Server
			0000031916			SES MED	SES Virtual Machine	Mar-25	112.00	1			Virtual Server
			0000031010			SES MED	SES Virtual Machine	Mar-25	112.00	1			Virtual Server
			0000031916			SES FSPP	SES Virtual Machine	Mar-25	112.00	1			Virtual Server
			0000031310			SES FSPP	SES Virtual Machine	Mar-25	140.00	1			Virtual Server
			0000031916			SES FSPP	SES Virtual Machine	Mar-25	140.00	1			Virtual Server
			0000031916			SES ARC	SES Virtual Machine	Mar-25	28.00	1			Virtual Server
			0000031310			SES SERVICES	SES Virtual Machine	Mar-25	112.00	1			Virtual Server
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			00000831916			SES MED	SES Virtual Machine	Mar-25	112.00	1			Virtual Server
			0000831916			SES MED	SES Virtual Machine	Mar-25	112.00	1			Virtual Server
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			0000831916			SES ARC	SES Virtual Machine	Mar-25	7.00	1			Virtual Server
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			0000831916			SES MAIZE	SES Virtual Machine	Mar-25	112.00	1			Virtual Server
			0000831916			SES MAIZE	SES Virtual Machine	Mar-25	112.00	1			Virtual Server
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			0000831916			SES MAIZE	SES Virtual Machine	Mar-25	112.00	1		Charge:	Virtual Server
			0000831916			SES MAIZE	SES Virtual Machine	Mar-25	112.00	1		Charge:	Virtual Server
			0000831916			SES MED	SES Virtual Machine	Mar-25	112.00	1	112.00	Charge:	Virtual Server
			0000831916			SES MAIZE	SES Virtual Machine	Mar-25	112.00	1		Charge:	Virtual Server
			0000831909				SES Virtual Machine	Mar-25	112.00	1	112.00	Charge:	Virtual Server For CUI
1	129862	624014	0000831916	2025-03-01	anderson	SES MED	SES Virtual Machine	Mar-25	112.00	1	112.00	Charge:	Virtual Server

Fun Ideas Outside of Work

Find a recipe –
what can i make for
dinner with chicken
asparagus goat cheese





You can make a delicious Chicken and Asparagus Goat Cheese Skillet. Here's a simple recipe idea:

Ingredients:

- 1 lb. Chicken breasts
- 1 bunch of asparagus, trimmed and cut into 2-inch pieces
- 4 oz goat cheese, crumbled
- · 2 cloves garlic, minced
- 1 tbsp olive oil
- Salt and pepper to taste
- · Optional: lemon zest or juice, fresh herbs like thyme or parsley

Instructions:

1. Prepare the Chicken:

- o Season the chicken breasts on both sides with salt and pepper.
- o Heat olive oil in a large skillet over medium-high heat.
- Add the chicken to the skillet and cook for about 5-7 minutes on each side, or until golden brown and fully cooked through. Remove from the skillet and set aside.

2. Cook the Asparagus:

- In the same skillet, add a bit more olive oil if needed, then add the minced garlic.
 Sauté for about 30 seconds until fragrant.
- Add the asparagus pieces to the skillet and sauté for about 3-5 minutes until they're bright green and tender crisp.

3. Combine with Goat Cheese:

- Lower the heat to medium or medium-low.
- Return the chicken to the skillet with the asparagus.
- Sprinkle crumbled goat cheese over the chicken and asparagus, allowing it to melt slightly.
- o If using, add lemon zest, a squeeze of lemon juice, or fresh herbs for added flavor.

4. Serve:

- Let everything heat through for a couple more minutes, making sure the cheese is warmed
- Serve immediately, either on its own or over a bed of rice, quinoa, or with crusty bread on the side.

Fun Ideas Outside of Work

Create a playlist – create a play list similar to elton john music



Creating a playlist similar to Elton John's music involves capturing the essence of his style—classic rock with a touch of glam, piano-driven melodies, and poignant lyrics. Here's a playlist suggestion:

- "Goodbye Yellow Brick Road" by Elton John
- 2. "Your Song" by Elton John
- 3. "Tiny Dancer" by Elton John
- 4. "Bennie and the Jets" by Elton John
- 5. "Rocket Man" by Elton John
- 6. "The Piano Man" by Billy Joel
- 7. "Bohemian Rhapsody" by Queen
- 8. "Let's Dance" by David Bowie
- 9. "Summer Highland Falls" by Billy Joel
- 10. "Maggie May" by Rod Stewart
- 11. "Hotel California" by Eagles
- 12. "Somebody to Love" by Queen
- 13. "Go Your Own Way" by Fleetwood Mac
- 14. "More Than a Feeling" by Boston
- 15. "Ride Like the Wind" by Christopher Cross
- 16. "Superstition" by Stevie Wonder
- 17. "Black Velvet" by Alannah Myles



Fun Ideas Outside of Work

Build a picture –
show me a picture of an
accountant working on a
beach









Questions?

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