Generative Al in Campus Marketing & Communications

Fall 2023



Who we are



Didier Contis

Executive Director of Academic Technology, Innovation, Research Computing

Office of Information Technology (OIT)



Eric Sembrat, Ph.D.Director of Digital Learning Technologies

Center for 21st Century Universities (C21U)



What we're discussing today

- Introduce Generative AI
- Situate AI with Marketing and Communications
- Identify benefits opportunities
- Highlight considerations, limitations, and cautions
- Open floor discussion



Introducing Generative Al

(in less than 5 minutes)



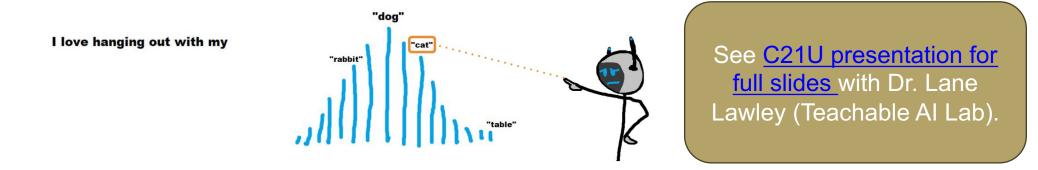
What is Generative AI?

- A machine learning algorithm that identifies patterns and structures in a gigantic set of data to generate 'new' data.
 - Output resembles its learned input data.
 - Models (designs) accept, process, and deliver different types of data.
- You can find more details via Gartner.
- Generative AI providers (such as OpenAI) are constantly evolving and growing their toolsets.



Generative AI details

- Text generators, such as <u>ChatGPT</u>, work by iteratively <u>predicting the next word</u> or phrase in its output.
 - Based on its source data and training.
 - Picks from a high-probable (but not always the top probable) next word or phrase.

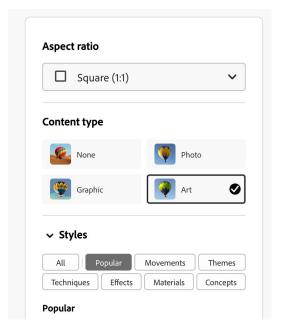


- Generative AI output is not always uniform or identical for the same prompt or situation.
 - You can re-roll a prompt query for different output.



All about Prompts

- Generative AI is built around user interaction called prompts.
- Prompts are directives you write to situate and command the Generative AI.
 - It is the (past) context that the Generative AI uses in predicting its next output.
 - Prompts can be incremental and build upon each other (such as ChatGPT).
 - Generative AI treats your prompt input as its arbiter of truth.
- Prompts can be solely text input, or a tool with added context options:





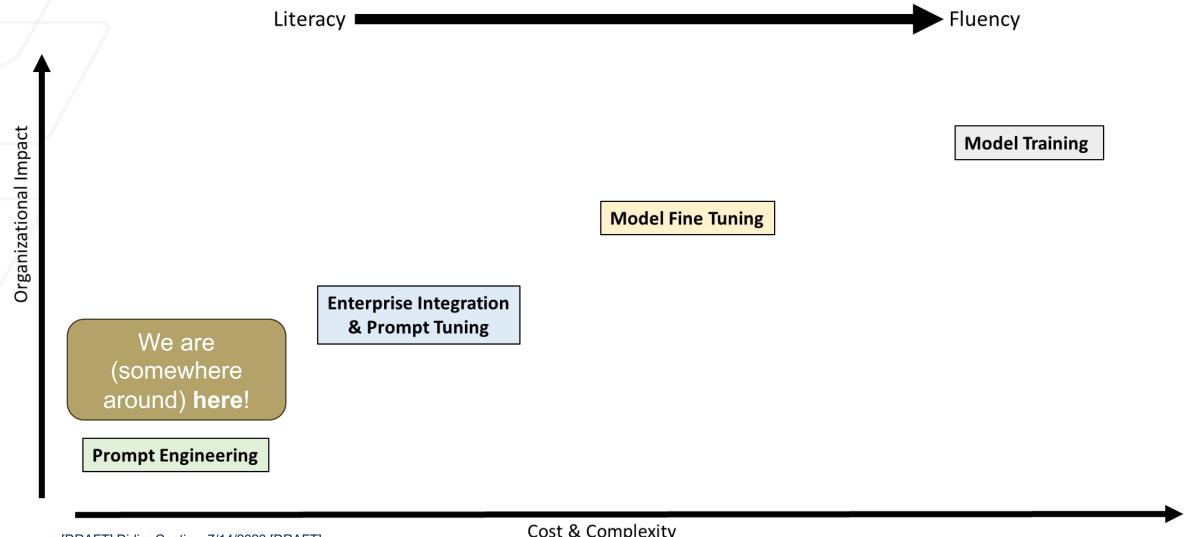


Our AI Ecosystem is in its infancy

- Early work has focused on AI towards research, instruction, and education:
 - AI-ALOE (Jill Watson teaching assistant)
 - Teachable AI Lab
 - Machine Learning @ GT
 - Al Hub
- Policy, Procedures, Detailed Best Practices are work in progress projects
 - For marketing and communications
 - Generative Al Editorial Style Guide (Kristen Bailey, Brigitte Espinet, Eric Sembrat)
 - For campus
 - Generative Al Knowledge Base (Didier Contis, Warren Goetzel, Eric Sembrat, and many others)
 - OpenAI + Microsoft cloud services (OIT)
 - For instruction
 - Generative AI for Instruction (Vincent Spezzo)
 - <u>Campus course syllabi best practices</u> (David Joyner)
 - (and other projects, and our faculty/student contributions)

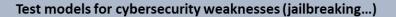


Organizational Maturity Model of Generative Al usage



Generative Organizational Implementation

Cost & Impact



Quality Assurance and Regression Testing

Prompt Engineering

Change Management & Training

- Generative Al 101
- Best practices
- Teaching people to use tools using prompt chaining

We are (somewhere around) here!

Enterprise Integration & Prompt Tuning

Retrieval Augmented LLMs

Develop conversational assistants connected to semantic models (embedding techniques)

Knowledge Curation

- Knowledge curation by human
- Knowledge development by human experts
- Knowledge development through Generative AI summarization

Al Enterprise Integration

Generative AI integration with major ERPs and Platforms (Microsoft CoPilot, ...)

Model Fine Tuning

Fine Tuning Existing Model

- Select existing LLM model (commercial or open-source to be fine-tuned)
- Develop and curate dataset and knowledge to fine tune model

Model Training

Training Model from Scratch

- Training Datasets curation and validation
- Research and Implement Model Optimization Techniques

Al Governance definition & integration with Organizational Governance (Privacy, Data, IT)

Organizational Policies and Guidelines: Technology & Products review, Privacy, Security, and Risk Management



Situating Al in Communications



I asked HighEdWeb for their experiences...

- <u>I reached out</u> to <u>HighEdWeb</u> (we have an <u>Institutional Membership</u>) for examples:
 - Summarizing articles (x4)
 - Generating SEO keywords/research (x2)
 - Generating email subject lines (x3)
 - Generating article titles (x2)
 - Generating ledes
 - Editorial content review
 - Design support (image generation)
 - Photoshop AI tools (x2)
 - Programming/code help (x2)



Generative AI for Marketing & Communications

- Idea, template generators
 - "I'm a {role} at Georgia Tech focused on {duty}. Provide five new name proposals for a {new area of focus}, with their acronym."
 - "Give me a RFP template for a web project to add a dizzying animation carousel."
 - "I'm a writer focusing on commercials for Georgia Tech. Provide a 30second transcript for a commercial featuring Georgia Tech students studying and their tensions at end-of-semester."
- Summarizers and snippets
 - "Given this story text below, can you provide a social media preview text preview for the website? {text_goes_here}"
- Focused work (via roleplay)
 - "Prep for an interview on {X} with {Y}. Here's the expected focus. You would be the interviewer, and I'll be the interviewee."



Generative AI for Marketing & Communications

- Regenerating content for a new audience/focus
- Multimedia processing or generation
 - Audio transcripts
 - Text-to-speech generators
 - Image or video creators
 - Image or video fills
- Meeting madness
 - Action item generation
 - Meeting synopsis generation
 - On-demand transcription and captions



Prompt:

A female professor wearing a business suit, floating in outer space, surrounded by broken roman pillars. Digital Art.

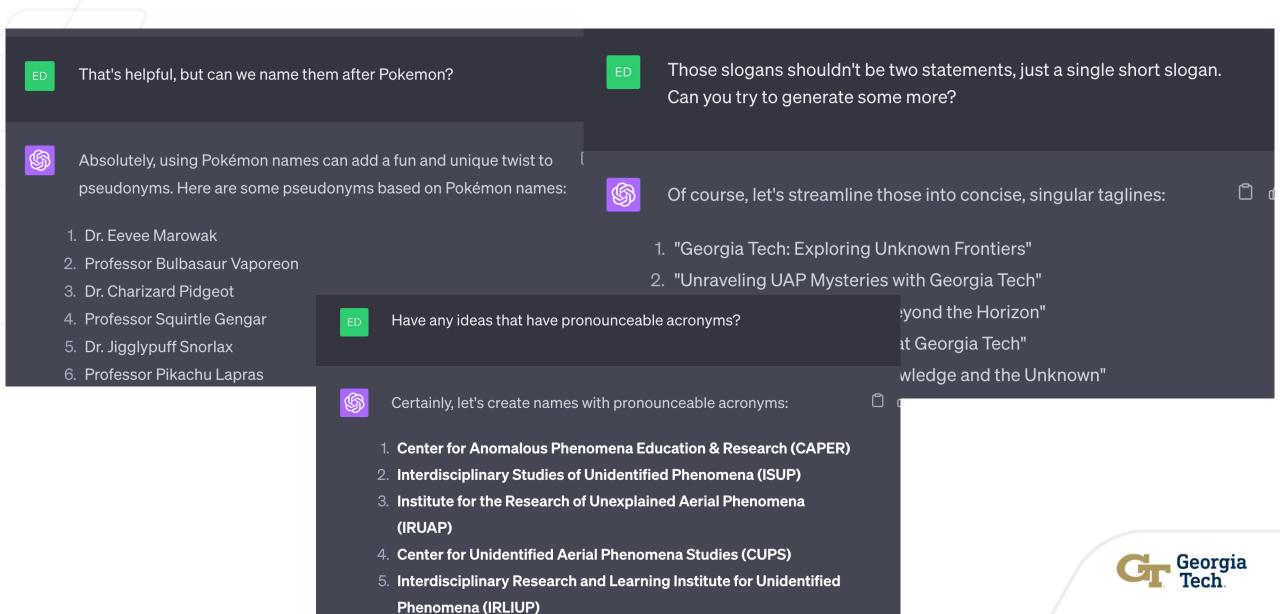


In action (generated < 5 minutes)

- Prompt topic: Georgia Tech's research and efforts with Unidentified Autonomous Phenomenon (UAP)
 - Campus focus:
 - Research area overview, scope, focus areas.
 - Policy and ethics application.
 - IRB proposal template.
 - School or College creation ideation.
 - Center name ideas (with or without pronounceable acronyms).
 - Social and stories:
 - Leadership member quote outlining benefits to research.
 - Social media campaign posts (Facebook, LinkedIn).
 - Taglines related to the topic (general, 'Creating the Next').
 - General public press release.
 - Primer for state-level legislative body.
 - Commercial transcript for 'Center for Unidentified Aerial Phenomena Studies CUPS: Charting the unknown, for a better tomorrow."
 - Faculty pseudo-names (space themed, Pokemon themed, female scientists, rock types).
 - Process:
 - Action plan for communicating new Center.



In action (generated < 5 minutes)





Generative AI benefits

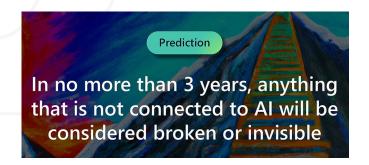
- Automate boilerplate/procedural work.
- Provide immediate and continual responses.
- Generate <u>first communications drafts</u>.
- Embed capability within services and systems (like <u>Drupal</u>).
- Focus better on business operations (meeting productivity).
- Microsoft's 'Copilot' moniker highlights the usage opportunities of Generative AI.

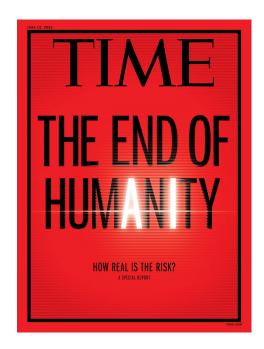


Al Limitations, Cautions, & Considerations



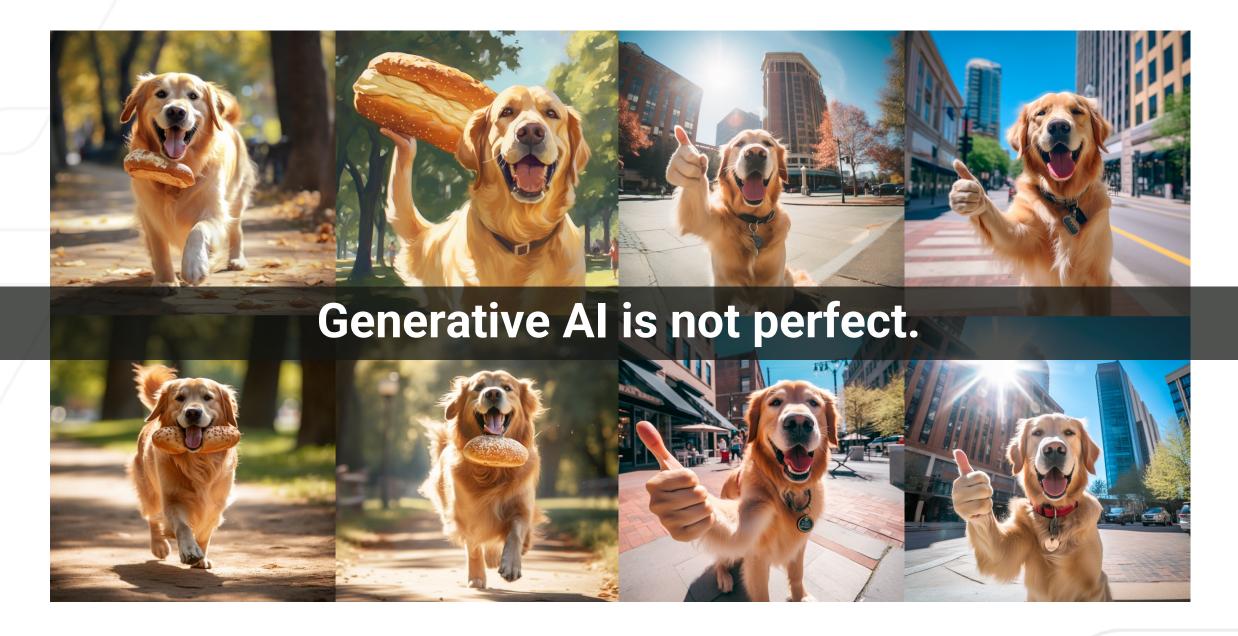
Some of the challenges ahead of us





- Communication and Change Management
 - Technology Solutionism (Evgeny Morozov)
 - Fears: "Al is coming for my job"
- Source data biases (e.g. the American smile)
- Hallucinations
- Generative AI is not predictable
- Knowledge cutoff
- Trust: auditing and explainability
- Data Governance, Privacy and Security
- Costs to train and run







Space

Tech Policy

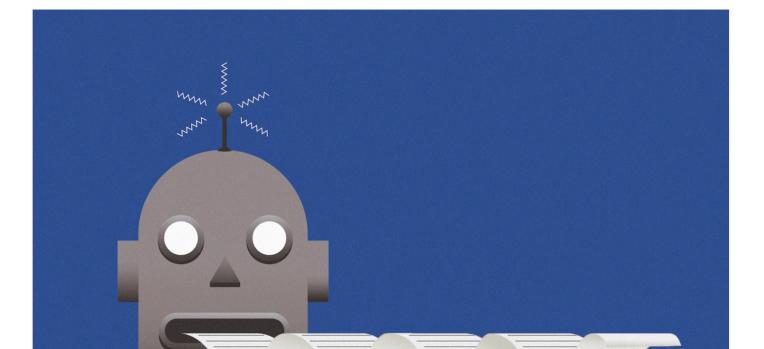
How an AI-written Star Wars story created chaos at Gizmodo

The error-filled story about Star Wars movies and TV shows demonstrates why artificial intelligence shouldn't be involved in news-gathering, reporters said



By Pranshu Verma

July 8, 2023 at 7:00 a.m. EDT



MOST READ TECHNOLOGY >



Why printers stop connecting to WiFi and your other printer questions



Join our Generative Al for Marcomm Office Hours in the Campus Communicators Teams from 1-3pm!



Our next Start-up Series presentation

- Research Storytelling
 - Thursday, Aug. 17, 12:30 p.m.
 - Registration link (Teams)
- Learn how to hook your audience, draw them into your story, and share the incredible research that is making an impact.
- You'll learn how to leverage our research writing template to easily cover published papers and grants.
- And we'll share examples of the **collaborations across campus with colleagues** like you to amplify our communications.
- Presentation by Angela Ayers and Georgia Parmelee from Research Communications.

