

Uses of Generative AI in Research Administration: Practical Applications from the Field

AnnMaria De Mars¹ • Michael Selburg² • Jeanette Vega³ • Sandra Justice⁴

¹The Julia Group; ²Turtle Mountain College; ³The College of New Jersey; ⁴University of South Florida

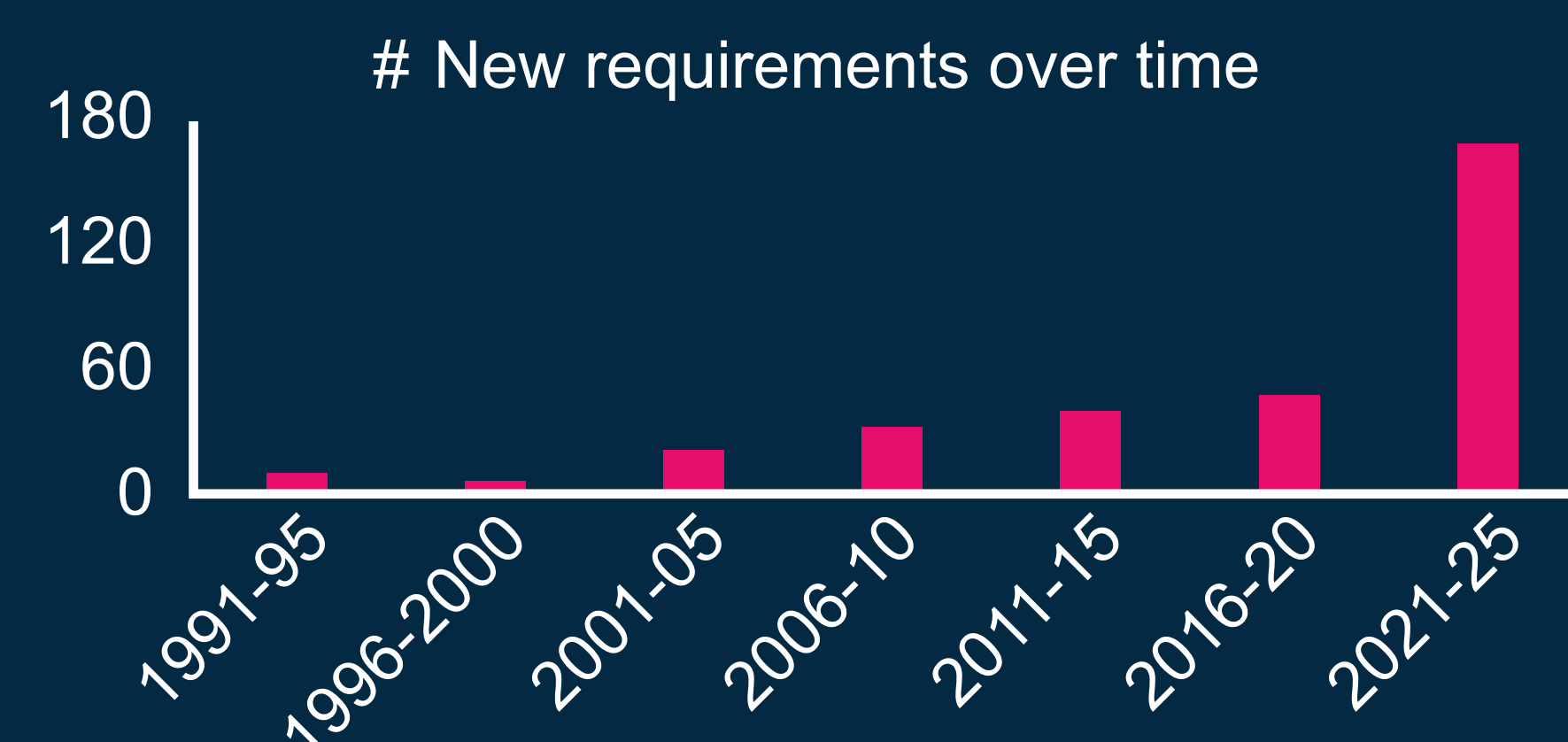
4 main categories of use observed

Problem:

More work & complexity but no additional staff

Research administrators are increasingly being squeezed between PIs under pressure to increase external funding, who expect more administrative support (Schiller and LeMire, 2023), and contracting university budgets resulting from reduced enrollment.

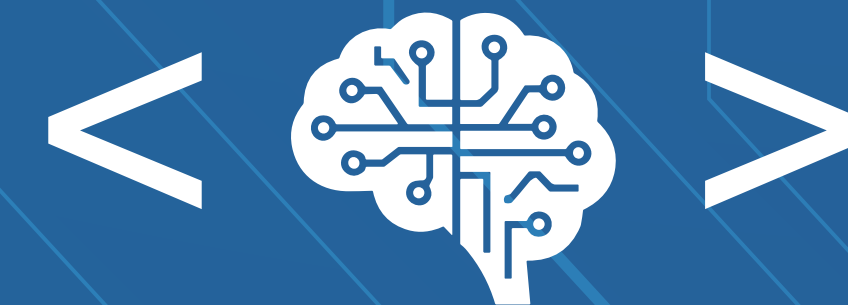
The field is only becoming more complex, with new or updated federal requirements increasing dramatically from 1991 to 2025 (Council on Governmental Relations, 2026).



Is generative AI the solution?

Generative AI use was assessed across 3 contrasting institutions:

- University of South Florida: R1 Institution with 49,622 students, 3,565 faculty and research staff
- The College of New Jersey: Primarily Undergraduate Institution with 8,141 students, 755 faculty
- Turtle Mountain College: Tribal College with 872 students, 51 faculty



AI-assisted coding

Writing computer code to automate tasks such as time and effort reporting

Example:

A VBA macro automating the creation of individual "Effort Certification" reports for PIs, pulling data from a master list, connecting it to project information, and generating a formatted, print-ready tab for every PI found in the data

Key takeaways:

- Nothing is obvious to a computer
Must be specific about data structure, e.g., type of item, whether it is a file, folder, or shortcut
- Learn from and save successful code



Digital intern

Using prompts to automate clerical tasks

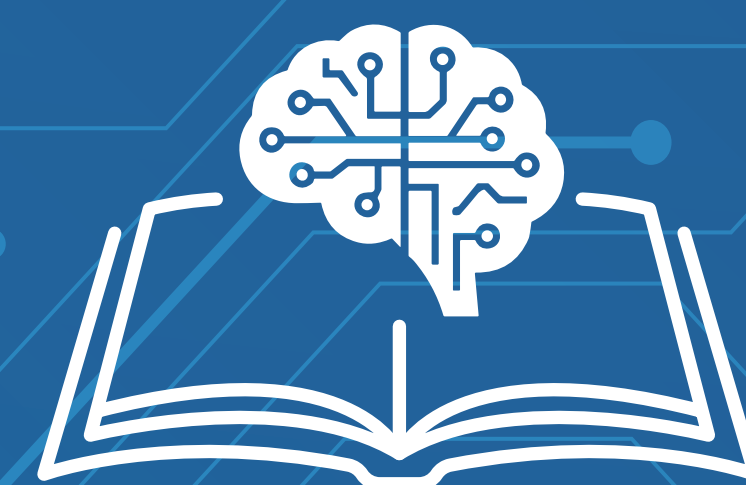
Examples:

Reference formatting—"Format these references in APA style and sort in alphabetical order"

Data formatting—"Convert these data into the following format:"

Key takeaways:

- A simple task for which the LLM had a large number of examples to learn from worked 100% of the time with a single prompt
- It is important to save successful prompts



AI tutor

Using AI applications for training purposes, onboarding new staff, or grants management

Example:

Use of Gemini Notebook (formerly NotebookLM) as a source-grounded AI-powered research assistant to:

- Create instructional videos
- Query internal documentation for evaluation purposes
- Calculate equipment maintenance costs

Key takeaway:

- Gemini Notebook and the similar product Copilot Notebook are only as effective as the sources provided
e.g., Errors were observed in training video, highlighting the need for oversight



Human in the loop required

Initially using AI for writing tasks, but with significant human oversight

Examples:

"Brainstorming" using retrieval-augmented generation

- Observations showed only < 20% of AI-provided recommendations were usable

Evaluating proposals for compliance

Key takeaway:

- Although it is necessary for a human to evaluate output, use of AI for this purpose is beneficial because it can generate some useful results with very low time and cost requirements

Perils of generative AI use:

Risk of hallucinations

- Results referencing topics with limited online presence warrant extra scrutiny, e.g., queries related to Indigenous populations
- Prompts requesting a specific large number of results are at increased risk, e.g., asking for 12 areas of related research overlooked by a proposal

Data leaks

- Faculty and staff should ensure only secure AI applications are used to prevent proprietary information from being made publicly available

Misuse of results

- Results should be scrutinized and used appropriately, ensuring content added to a proposal is not directly pasted from AI output, overly redundant, or lacking in detail

Conclusions

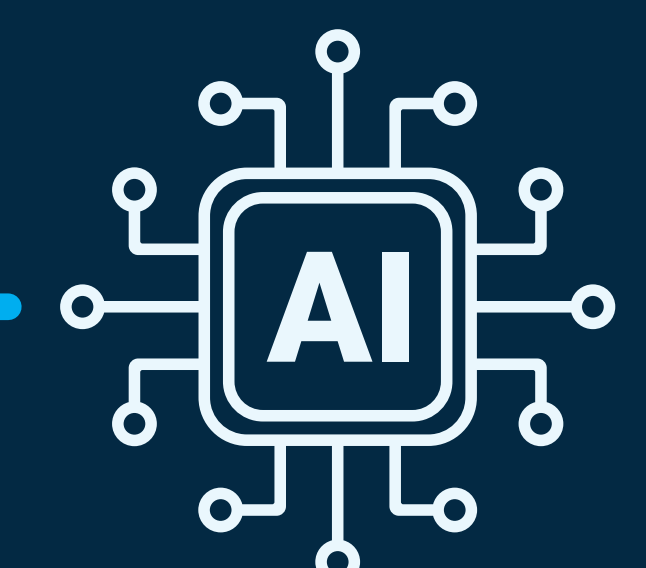
Generative AI models can increase productivity **when appropriately applied** but are by no means an effective replacement for research administrators

- On average, PIs and research administrators reported saving 5-15% of their time per week

Most effective use:

- Validate results—Verify sources, run AI-generated code
- Involve experts—More experienced staff can identify and correct hallucinations that less experienced staff miss
- Simplify tasks—Break complex tasks into smaller steps to reduce hallucination risk

Adoption of local LLMs within research administration is likely to increase exponentially in the future due to improvements in cost, confidentiality, and ease of use



ACKNOWLEDGEMENT: This work was supported by the National Science Foundation PRIMER Program (Grant Nos. 2448900 & 2434079)

REFERENCES: Schiller & LeMire (2023). A Survey of Research Administrators: Identifying Administrative Burden in Post-Award Federal Research Grant Management. *Journal of Research Administration* 54(3), 9-28. Council on Governmental Relations (2026). Changes in federal research requirements since 1991. Council on Governmental Relations Blog. <https://www.cogr.edu/blog/changes-federal-research-requirements-1991>.

