

Automating Writing from Androids to AI

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AI Writing is Everywhere

- ChatGPT and other AI-based language models are upending education and creative and professional writing practices
- Writing researchers and educators need both a clear picture of what's happening and what the historical contexts for such disruptions are
 - We need to know how to prepare students for professional writing tasks
 - We need to have a deeper understanding of the components of writing to see what's gained and lost in automating aspects of writing.

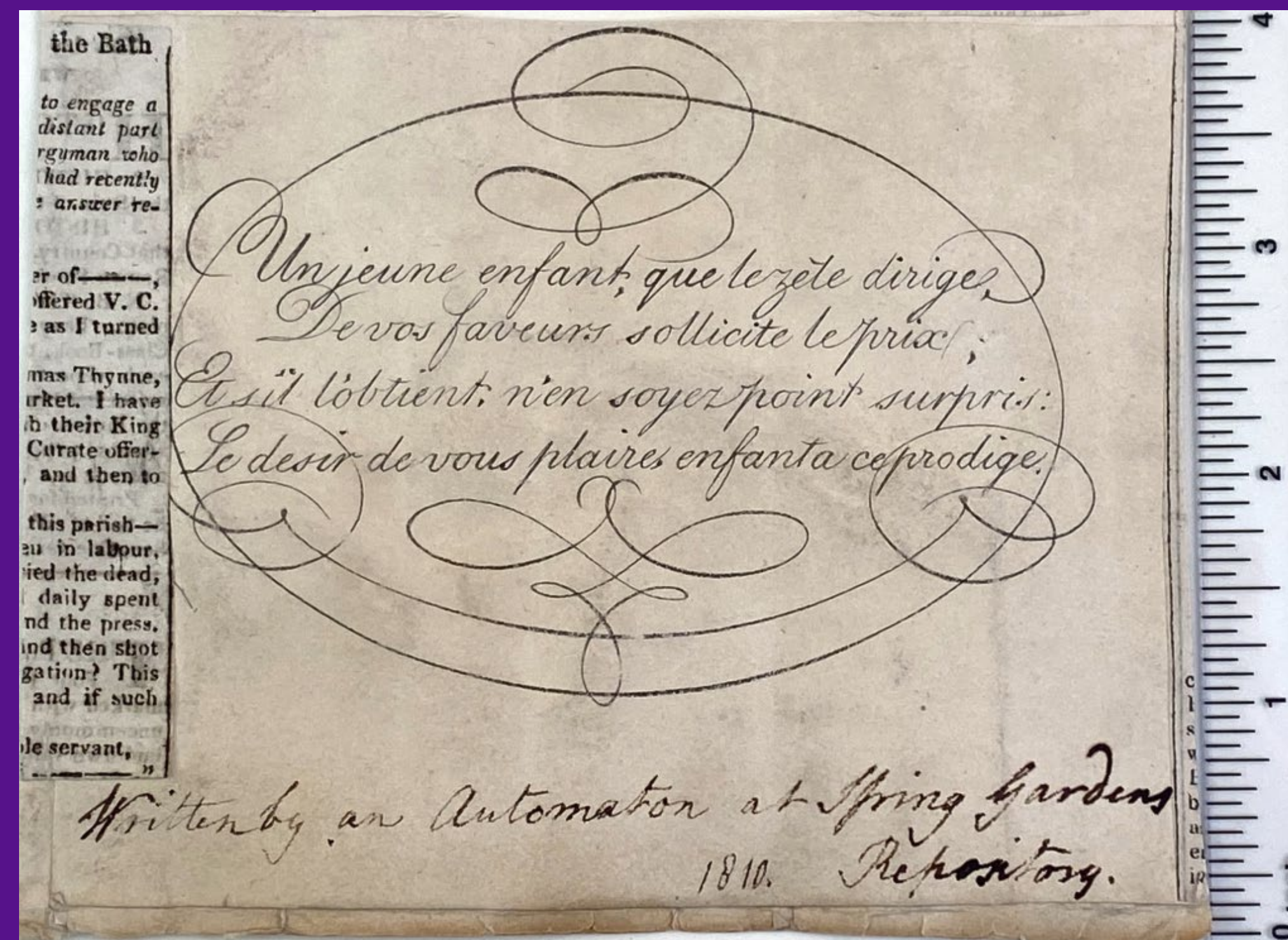
Historical contexts for AI

- This project examines historical contexts for our contemporary moment, when AI writing is in the headlines
- The larger project covers six moments in the automation of writing:
 - 18th century androids programmed to perform the gestures of writing
 - 19th century spiritualist approaches, called automatic writing, such as with seances and Ouija boards
 - Late 19th century automation through templates and typewriters, which spread through office contexts
 - Early 20th century proceduralist approaches, recombining language according to set procedures, such as practiced by Oulipo poets
 - Mid 20th century computational approaches to solving the problems and patterns in language, early natural language processing and linguistics
 - Early 21st century statistical models of language using neural networks and deep learning, evidences in large language models (LLMs) such as ChatGPT



Current developments in AI language models have educators asking: what does it mean to be a **human writer** among faster and more prevalent **machine writers?**

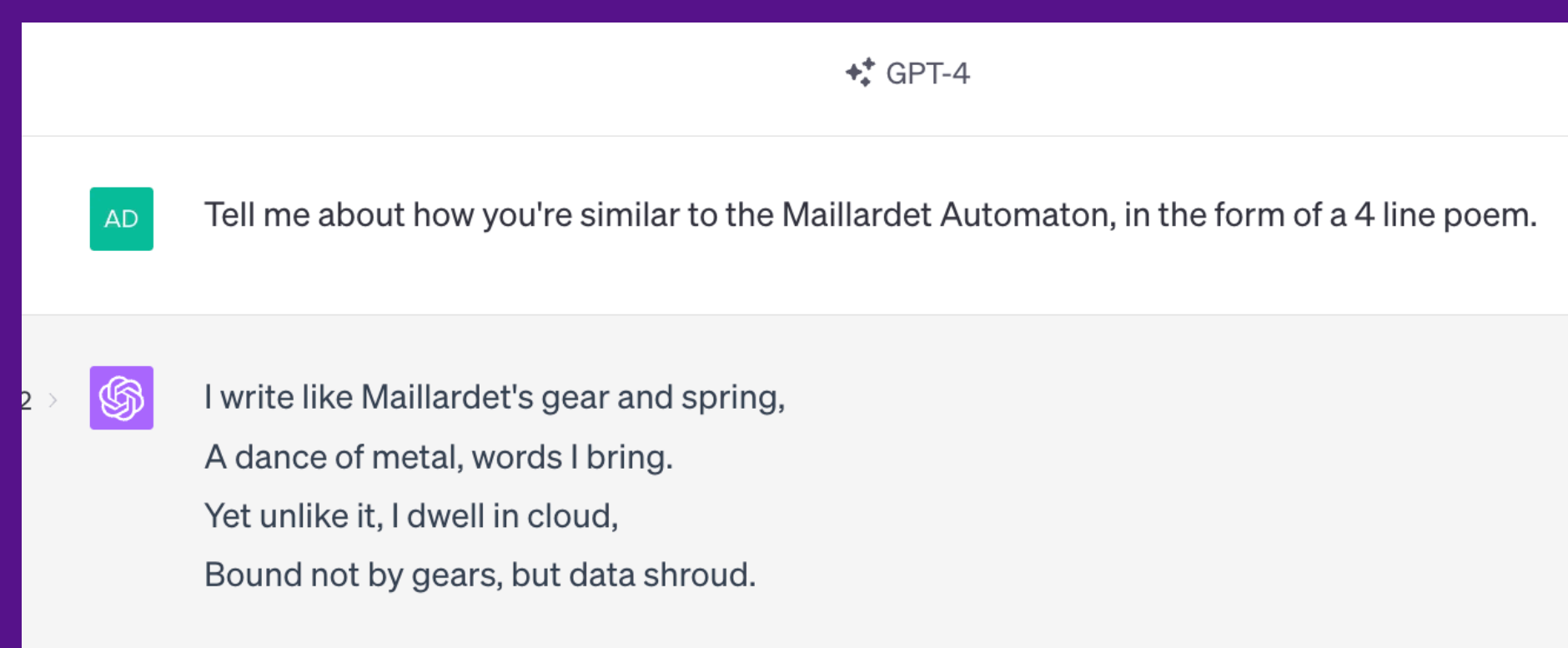
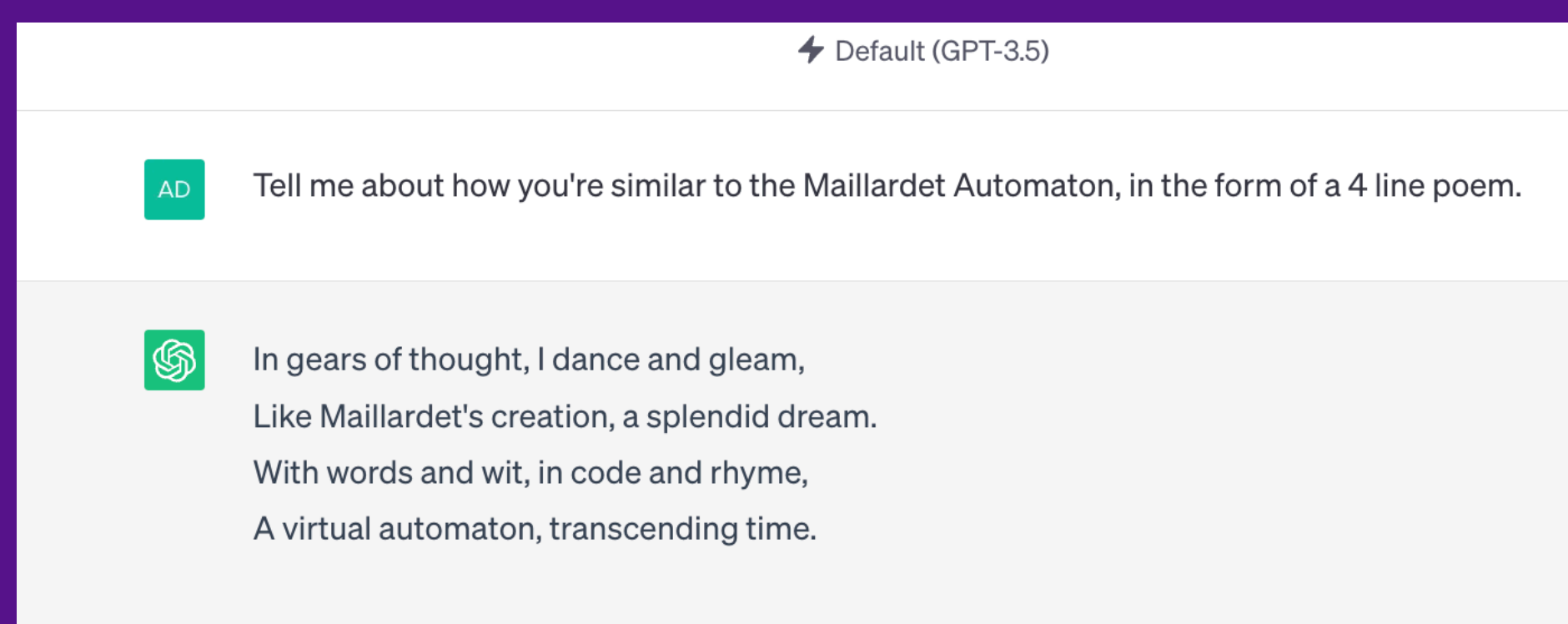
This project examines **mechanical, spiritual, procedural, and computational** approaches to automated writing across history to answer that question.



One of the poems written by Maillardet's Automaton, 1810. Jeremy Norman's *History of Information*. <https://www.historyofinformation.com/image.php?id=8381>



Maillardet's Automaton, on display at the Franklin Institute. Image from Wikimedia Commons https://upload.wikimedia.org/wikipedia/commons/f/f1/Henri_Maillardet_automaton%2C_London%2C_England%2C_c._1810_-_Franklin_Institute_-_DSC06656.jpg



ChatGPT's responses to a prompt asking it to relate itself to Maillardet's Automaton, in both GPT-3.5 and GPT-4 versions.

Project Support

- Pitt funding covers:
 - Subscriptions to generative AI services to explore their functions, including Sudowrite, GPT-4, and Midjourney.
 - Research travel to the Franklin Institute in Philadelphia to visit the Maillardet Automaton and the Amazing Machines exhibit.
- Pitt support will aid in the writing of Chapters 1 and 5 in a book, *Automating Writing from Androids to AI*.

Potential Impact

- A lot has been written about large language models and the use of AI writing in education and professional settings, but very little attention has been paid to the historical contexts of automating writing.
- This book and articles supported by this project will be useful for courses on generative AI and writing, which are beginning to be launched at universities.
- A historical context will help designers and users of AI writing to understand what's gained and lost in automation of thought work such as writing.
- By breaking up writing into mechanical, spiritual, procedural, and computational components, writing researchers will gain greater understanding of the writing process.

Summary

In vivid historical and contemporary examples, *Automating Writing from Androids to AI* traces how writing processes have been distributed across people and technologies from the Enlightenment to current artificial intelligence (AI) research, whether through mechanical automata, otherworldly ghost writing, business amanuenses, or neural networks. The idea that writing forms a boundary between humans and others relies on an apparent coherence of the human writing process. The book teaches us about writing, artificial intelligence, automation and illuminates more ethical orientations to these configurations of technologies and others—orientations that are crucial for navigating this rapidly changing landscape of writing.

Acknowledgements

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