Transforming Libraries for the Future: Elevating Service Innovation with Generative Artificial Intelligence and Prompt Engineering

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Yinlin Chen
ylchen@vt.edu

Assistant Director, Center for Digital Research & Scholarship
Virginia Tech Libraries
Everyone could be a Sorcerer with Generative AI

- Generative AI (GenAI) is commonly accessible and will become more prevalent.
- An assistive tool to apply your domain knowledge to specific tasks
- People who know how to utilize AI will be more powerful than those who don't.
Interact with GenAI need Skills

ChatGPT: The transformer, an essential device for transformers, was developed in the early 1980s. Its development attributed to the invention of Peter Stanley, who built on the principles discovered by William Stanley and Karl Zunow. The transformer design was developed by Henry Tesla and Nikola Tesla, who laid the foundation for the widespread use of transformers.

https://arxiv.org/abs/2311.16452

ChatGPT: The concept of transformer models in natural language processing (NLP), as All You Need by Vaswani et al., published the transformer architecture, mechanisms, allowing models to weight one sentence. The introduction of transformer-wide range of NLP tasks, including machine-sentiment analysis, among others.

ChatGPT: The Transformers franchise, where the franchise has transformed into vehicles, animals, and other objects, was created by a collaboration between the American toy company Hasbro and Takara Tomy (formerly known as Takara). The concept of transforming into vehicles, and another line called Micromaster Rebranded them, and launched them, and then backstory involving Autobots and Decepticons. The brand quickly expanded to include a television show, as well as a wide range of merchandise, solidifying Transformers as a significant cultural and commercial phenomenon.

* https://arxiv.org/abs/2311.16452
Augment Human Capabilities with AI

• Prompt Engineering
  – Zero-shot Prompting
  – Few-shot Prompting
  – Chain-of-Thought Prompting
  – Retrieval Augmented Generation (RAG)

• Instruction Tuning

• Fine Tune

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Across our research, here’s what stood out:

• 70% of Copilot users said they were more productive, and 68% said it improved the quality of their work.

• Overall, users were 29% faster in a series of tasks (searching, writing, and summarizing).

• Users were able to get caught up on a missed meeting nearly 4x faster.

• 64% of users said Copilot helps them spend less time processing email.

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Left image: https://arxiv.org/abs/2109.01652
Top right image: Thinking, Fast and Slow. Book by Daniel Kahneman
Prompt Library for Academic Libraries

• Sorcerers need spell books; we need prompt recipes
• Foster a collaborative space
• Collect and share effective prompts
• Assemble collections of domain-specific prompts
• Export collections to instruction datasets for tuning LLMs
Transforming Libraries for the Future

IKEA Uses AI to Transform Call Center Employees Into Interior Design Advisors

IKEA Upskilled 8,500 Employees To Boost Sales by $1.4 Billion