Beyond Prompt Engineering: Tardy Engineering

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ABSTRACT

"Prompt engineering" † attempts to improve the quality of responses from generative AI ‡ systems by crafting questions that navigate the lack of actual semantics in these systems and improve the responses from syntactically plausible to potentially relevant. Presumably it also reduces the incidence of hallucinations §. This ad hoc activity is receiving substantial attention and energy, and it may eventually reach the point of actual utility, even if it lacks a sound basis. The natural next step will be improving efficiency, much as lazy evaluation improves the efficiency of software execution. In anticipation of this next phase, we introduce *Tardy Engineering*, a sound, principled basis for providing all the benefits attributed to prompt engineering together with increased efficiency and precision.

CCS CONCEPTS

Computing methodologies → Artificial intelligence → Natural language processing → Natural language generation

KEYWORDS

Generative AI, unnatural language, prompt engineering, tardy engineering, stochastic parrot

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Nemesis. Beyond prompt engineering: Tardy Engineering. In *Proc SIGBOVIK 2024, April 1 2024, 1 pp. http://sigbovik.org/2024/proceedings.pdf*

1. The fundamental theory of tardy engineering

[We regret that the body of this paper was too tardy to include here.]

References **

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- [2] WebMD. Hallucinations https://www.webmd.com/schizophrenia/what-are-hallucinations
- [3] Wikipedia. Engineering. https://en.wikipedia.org/wiki/Engineering
- [4] Wikipedia. Nemesis. Nemesis Wikipedia
- [5] Wikipedia. Stochastic parrot. Stochastic parrot Wikipedia

^{*} Nemesis is the Greek goddess who personified retribution for the sin of hubris. [4]

[†] Creative wordsmithing is in play here. "Engineering" is the practice of applying science and well-systematized knowledge to solve practical problems in predictable ways. It entails actually knowing something about the materials being engineered. [3]

[‡] Artificial, yes indeed. Intelligence, not so much. Word order patterns that statistically mimic human (or artificial) writing—that's a stochastic parrot, [5] not intelligence.

[§] The current fashion for calling generative AI's errors "hallucinations" is appalling. It anthropomorphizes the software, and it spins the errors as somehow idiosyncratic quirks of the system even when they're objectively incorrect. Moreover, WebMD's advice about hallucinations is "If you or a loved one has hallucinations, go see a doctor." [2]

^{**} In the new tradition of web-only "scholarship", which shares respect for ground truth with generative AI, we cite only stuff we found online. As Abraham Lincoln said, "Don't believe everything you see on the internet" [1]