

# The Emotional Mathematician AI

Reflection 3 - CART498-GENAI

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Concordia University, Feb 2026

May I say that my “poor emotional mathematician model” was doomed to failure from the start? First of all, I want to justify the choice of using the ChatGPT-4 mini, instead of the nano version, as an essentially aesthetic and artistic decision. Comparing the outputs of both, whether they made sense or not, I concluded that the mini model more accurately met (with ALL the reservations) the outputs I was stylistically seeking.

After three weeks of deeper engagement with AI models, it has become much clearer why these systems frequently generate frustrating responses, and why we shouldn’t blindly trust the results they produce. This week, in particular, the frustration caused by a seemingly simple output revealed itself to be an inherent characteristic of such models. For example, even with temperature 0, my model still exhibits variations and incorrect results. Although there is greater consistency in the errors, for example, systematically getting a calculation wrong like  $2^5$  and getting  $2^6$  right, the error persists.

This logic was also evident in classroom tests when I asked the model to solve integrals. Whenever the problem approached known examples or recurring patterns, the calculation was performed correctly, when it did not, the model failed. Even so, it still provides an answer, even though an incorrect one, since it seeks the most probable point within the regions for which it was trained.

Understanding the nuances behind these models has led me to reflect much more critically on how to use them efficiently. If before I already had a certain skepticism regarding the results, now that skepticism has become a structuring part of my process. More than that, this journey is making me think deeply about how to apply these technologies to my artistic work. In a way, that’s exactly what I tried to explore in this work: how to conduct investigations that allow me to better

understand these systems, use them more consciously, identify their biases, and reflect on the applications in an artistic manner.

P.S.: One last observation from my experiments during this week. The current GPT model chat believed it was 2024, at some point.