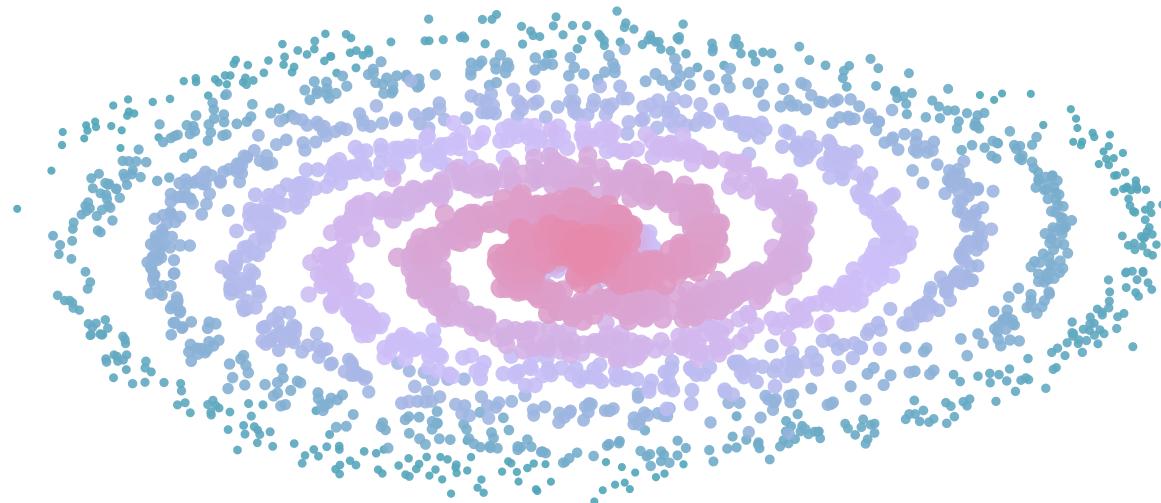


# Reproduction of the Anthropic's Counting Manifold



*Publish-ready workflow that lets you focus on ideas, not infrastructure*

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AUTHOR	AFFILIATION	PUBLISHED
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[Gurnee et al. \(2025\)](#) have shown that the representations of token positions in a line are located on a multidimensional manifold. In this work, we reproduce a part of their paper on the open models. We show that, contrary to the demonstration of Anthropic,

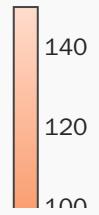
- lala1
- lala2
- lala3

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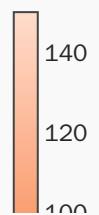
## Results

LLaMa3.1-8B

PCA (PC1–PC3)



PCA (PC4–PC6)



Legend

Trajectory

Metric

character\_count ▾

Citation

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References

1. Gurnee, W., Ameisen, E., Kauvar, I., Tarng , J., Pearce, A., Olah, C., & Batson, J. (2025). When Models Manipulate Manifolds: The Geometry of a Counting Task. *Transformer Circuits Thread*. <https://transformer-circuits.pub/2025/linebreaks/index.html> ↑

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