

# NoVo

## NoVo: Norm Voting Off Hallucinations with Attention Heads in Large Language Models

Ho Zhengyi, Liang Siyuan, Sen Zhang, Zhan Yibing, Tao Dacheng [ICLR 2025]

**What is it:** A method for reducing LLM hallucinations, by ranking factuality between candidate texts, given a context.

**How is it done:** Current methods rank text factuality in the output space with log likelihood. Our method rank text factuality in the hidden representation space with attention head norms.

**Why it matters:**

1. Our method achieves remarkable factuality gains of up to **110%**, generalises to **20+** benchmarks, is **training-free** and **tuning-free**. Other methods boost factuality by 70%, limited to 2-5 benchmarks, requires training and tuning.
2. Our method suggests that LLMs can **internally self-correct** common misconceptions with high log likelihood, using attention heads. This opens new avenues for using latent structures to self-enhance model reliability.

