

The solutions I provided are quite straightforward and clear. I personally didn't like the implementation of RoPE using `query_imag` and `query_real`, but the assignment is the assignment.

Also, I ran into a problem that sanity check fails due to setup problems on the local machine (I ran everything on a local machine, except fine-tuning).

What I mean is that my sanity check failed one time when there was the difference in one number in 4th digit after the decimal separator. However, with fixed setup and launching on Colab the problem disappeared and never happened again.