

Struct Fields

const char\* model path: the path to the RKLLM model file;

int32\_t num\_npu\_core: the number of NPU cores used during model inference; The

"rk3576" platform has configurable range [1, 2]; while the "rk3588" is [1, 3];

bool use\_gpu: whether to use GPU for prefill acceleration, default option is false;

int32\_t max\_context\_len: the maximum context length during inference;

int32 t max new tokens: the maximum number of generated tokens in inferencing;

int32\_t top\_k: top-k sampling is a text generation method that selects the next token

only from the top-k tokens with the highest probabilities predicted by the model. This

method helps reduce the risk of generating low-probability or meaningless tokens. A

higher top-k value (e.g., 100) will consider more token choices, resulting in more

diverse text generation, while a lower value (e.g., 10) will focus on the most probable

tokens, generating more conservative text. The default value is 40;

**float** top\_p: top-p sampling, also known as nucleus sampling, is another text generation method that selects the next token from a group of tokens with cumulative probabilities of at least p. This method balances diversity and quality by considering the probabilities of tokens and the number of sampled tokens. A higher top-p value (e.g., 0.95) results in more diverse text generation, while a lower value (e.g., 0.5)

generates more focused and conservative text. The default value is 0.9;

adjusting the probability distribution of output tokens. A higher temperature (e.g., 1.5) makes the output more random and creative. When the temperature is high, the model considers more options with lower probabilities when selecting the next token, resulting in more diverse and unexpected outputs. A lower temperature (e.g., 0.5) makes the output more focused and conservative. Lower temperatures mean that the model is more likely to choose high-probability tokens, resulting in more consistent and predictable outputs. In the extreme case of a temperature of 0, the model always