1) $Q \rightarrow$ [LLM ❄] $\rightarrow q_1, ..., q_n$

Deepseek-R1-Distill-Qwen-32B

3) $G^* \rightarrow$ [GNN 🔥] $+$ [Prompt] $\rightarrow$ [LLM ❄] $\rightarrow$ Answer

LLaMa-2-13B

2)

$\text{DAGR}_\alpha(z, z_Q, z_{q_1}) \xrightarrow{\text{PCST}} G_1 \rightarrow$ [LLM ❄] $\rightarrow a_1$

LLaMa-2-7B

$\vdots$

$\text{DAGR}_\alpha(z, z_Q, z_{q_n} \mid a_{n-1}) \xrightarrow{\text{PCST}} G_n \rightarrow$ [LLM ❄] $\rightarrow a_n$
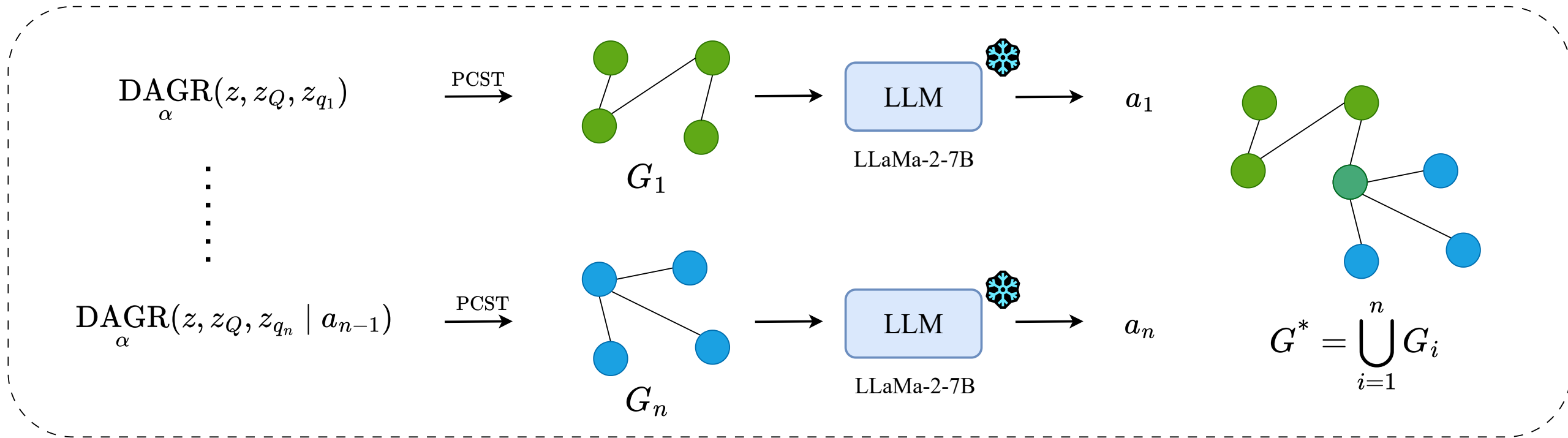
LLaMa-2-7B

$$G^* = \bigcup_{i=1}^{n} G_i$$

with $z_Q = z(Q)$ and $z_{q_i} = z(a_{i-1}, q_i)$