I'm curating a list of open research questions related to Anoma's peer-to-peer networking subsystem. Feel free to respond with anything relevant; I'll edit the top post to keep it up-to-date.

Can routing optimisation algorithms be discovered by reinforcement learning?

On the boundary between structured and unstructured networks, where the preferred topology of the network is learned over time based on local information, preferences, and measurements, can we characterise the multivariable optimisation problem of bandwidth, latency, resiliency, privacy, etc. sufficiently clearly that specific routing algorithms can be automatically found and updated with reinforcement learning or similar techniques instead of programming them in as heuristics or (computationally expensive) search problems?

What routing kudo systems are incentive-compatible?

What routing kudo (reward) systems are both incentive-compatible (encourage routing) and capture resistant (don't reward particular peers for capturing the network)? How do the possible mechanisms involving pre-commitment (commitment to pay for successful routing) vs. only paying post-route (with a secondary reputation metric) compare? Is full anti-Sybil necessary for a safe incentive system, or can we make do with something less?