Home

Jobs

Docs

Hackathons

```
^ q[J],
ry(0.8*pi) q[0];
ry(0.8*pi) q[1];
ry(0.8*pi) q[2];
ry(0.8*pi) q[3];
```

You are welcome to use BlueQubit's quantum and simulation devices to tackle these circuits. To crack the hardest ones though - you have to get creative and you might need to use other simulation tools as well.

📚 Peaked Circuits in a Nutshell

"Peaked circuits" are pre-constructed quantum circuits with a non-uniform distribution of measurement outcomes. They are designed in a way that one particular bitstring has a higher probability than others, e.g. O(1) as opposed to exponentially small amplitude.

They were introduced by Scott Aaronson as a way to achieve verifiable quantum advantage. Carefully crafted peaked circuits look like random circuits - like the one used by Google in their benchmark that would take supercomputers septillion=10^{25} years to replicate. However, unlike random circuits - peaked circuits are much easier to verify: all you need to do is to run them on a quantum computer and verify you get the correct hidden bitstring!

This quantum hackathon aims to test the skills of quantum researchers and enthusiasts in how well they can use quantum computers and simulators to crack such peaked circuits.

Coupons and Credits

You are welcome to use the coupon code BQPEAKHCTN and claim $10 credit for you BlueQubit account. This shall allow you to run quantum and other paid jobs on the platform.