IBM Qiskit PyTorch Quantum Device Benchmarkings December 2023
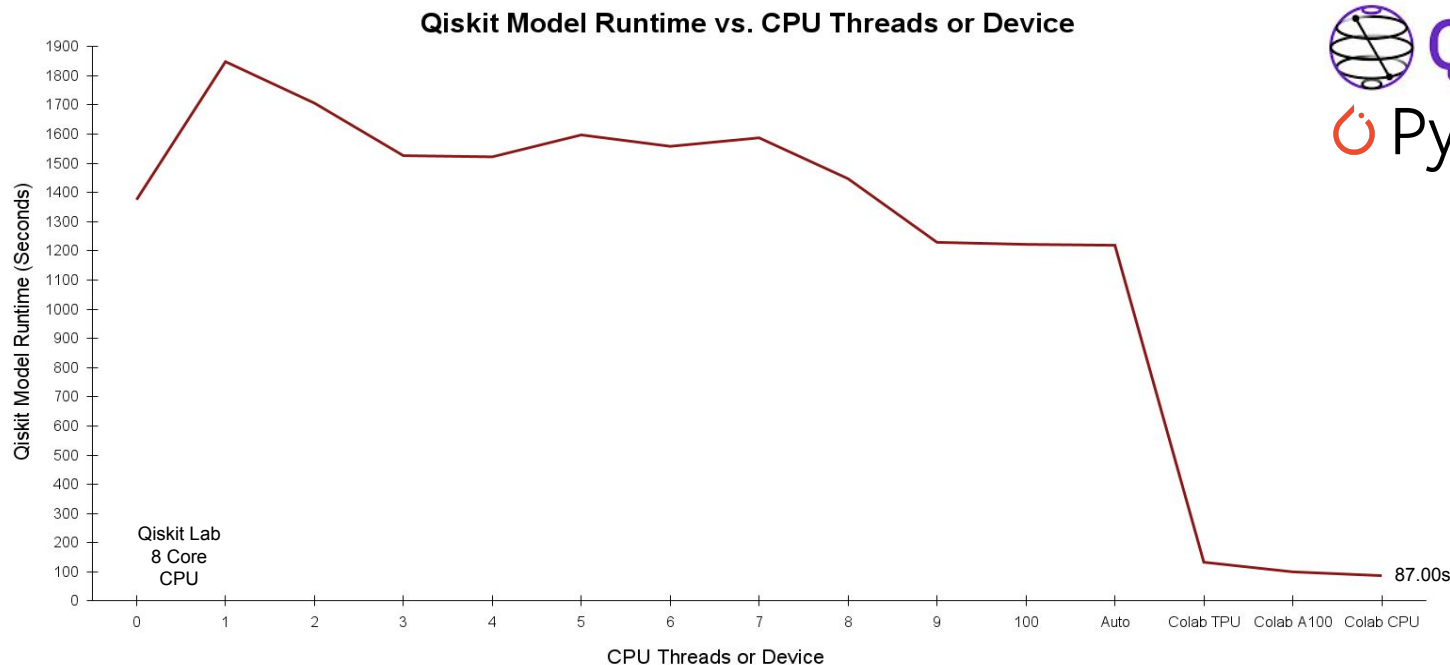

Qiskit Model Runtime vs. CPU Threads or Device

Qiskit Lab
8 Core
CPU

87.00s

CPU Threads or Device

Figure 1/Table 1: Qiskit Model Runtime vs. 8 Core CPU Threads or Device														
Threads	0	1	2	3	4	5	6	7	8	9	100	Auto	Colab TPU	Colab A100	Colab CPU
Time	1375.00	1848.00	1706.00	1526.00	1522.00	1597.00	1558.00	1587.00	1447.00	**1229.00**	**1222.00**	**1219.00**	133.00	100.00	**87.00**
Cost	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0072	$0.0363	**$0.0002**
Eff	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	1.04	0.28	**59.46**
Date	12/5/23	12/4/23	12/4/23	12/4/23	12/4/23	12/4/23	12/4/23	12/5/23	12/5/23	12/5/23	12/5/23	12/5/23	12/3/23	12/3/23	12/3/23

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