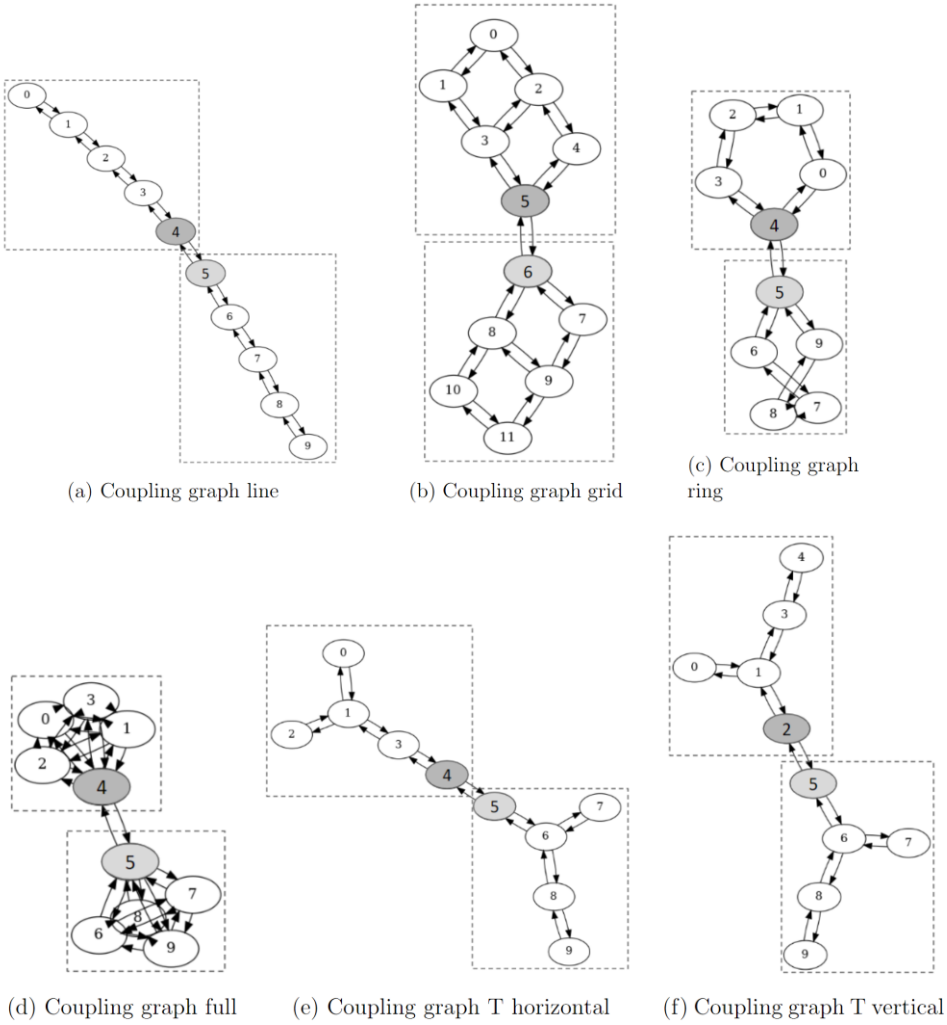
Layout	Num qubits	Group	Total qubits	Description
Full	10	2	20	
Full	7	3	21	Failed for 2 algorithms for circuit size = 15
Line	5	4	20	
Ring	10	2	20	
Ring	7	3	21	Mostly failed for circuit size = 15
Ring	5	4	20	Mostly failed for circuit size = 15
Grid	9	3	27	
Grid	4	5	20	
T_horizontal	5	4	20	
T_vertical	5	4	20	

NB: stopper at > 100 possible swap, for each circuit depth (dag-level) – reset after each level
For failed circuit, stopper increased to > 1000, but the algorithm still fails

Stopper algorithm – stopper is used **to exit** during active_list gate checking (if not infinity loop, because distance is not reduced):

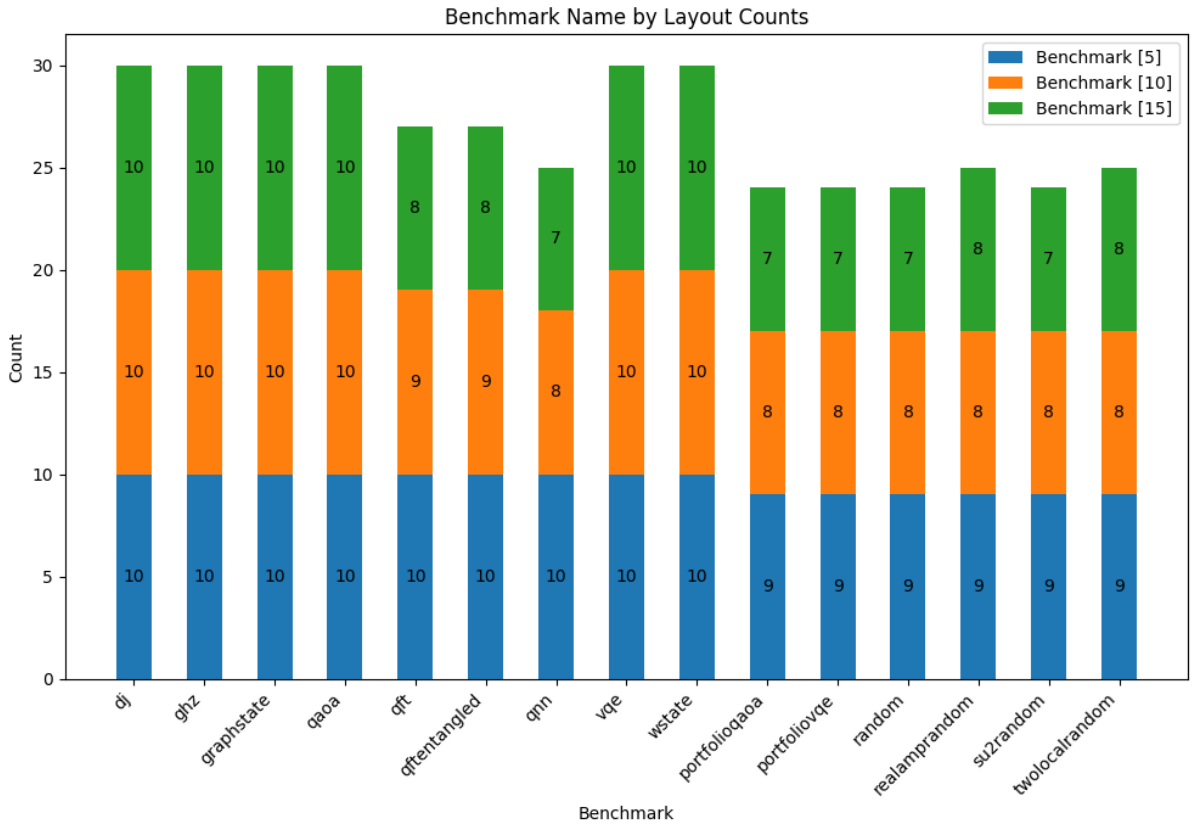
https://github.com/natashaval/qubit-mapping-distributed-qc/blob/a2d917c59fa471959753a2d1dd23bbbf740393fb/lib/debug_lookahead_routing.py#L160



(a) Coupling graph line (b) Coupling graph grid (c) Coupling graph ring

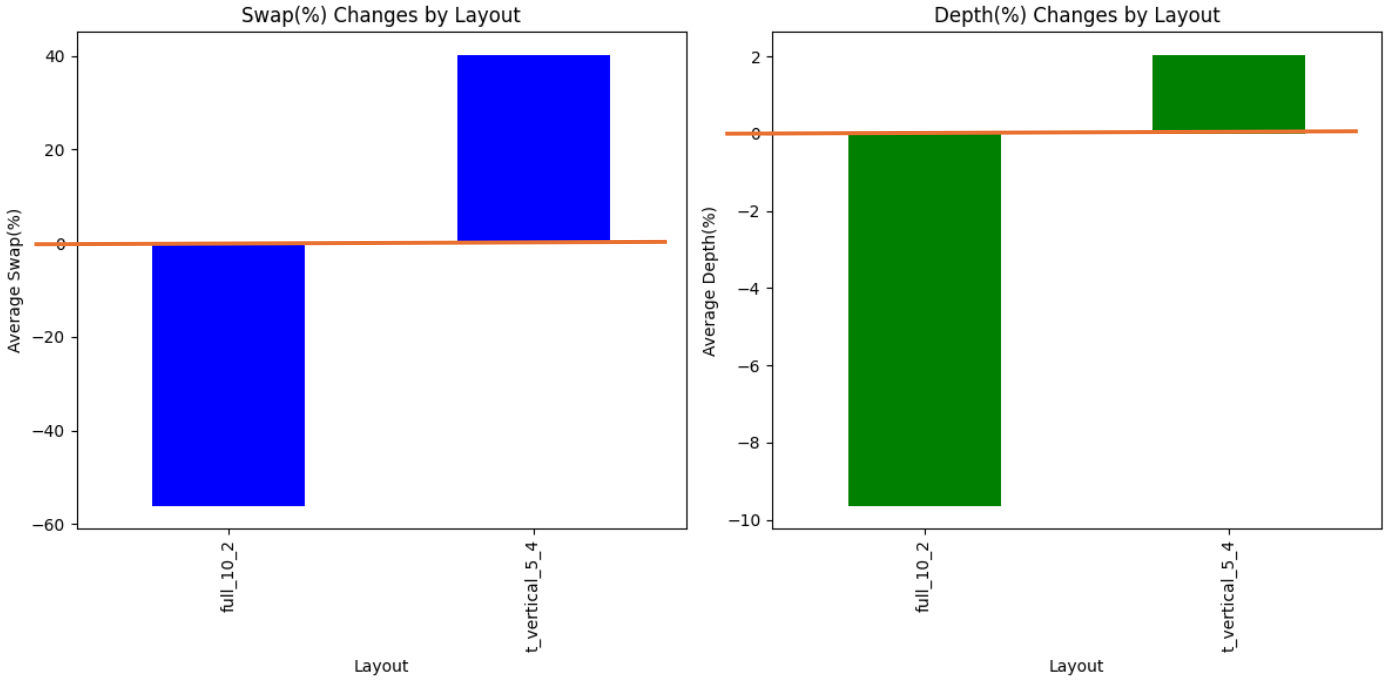
(d) Coupling graph full (e) Coupling graph T horizontal (f) Coupling graph T vertical

Figure 2.1: Generate group coupling graph

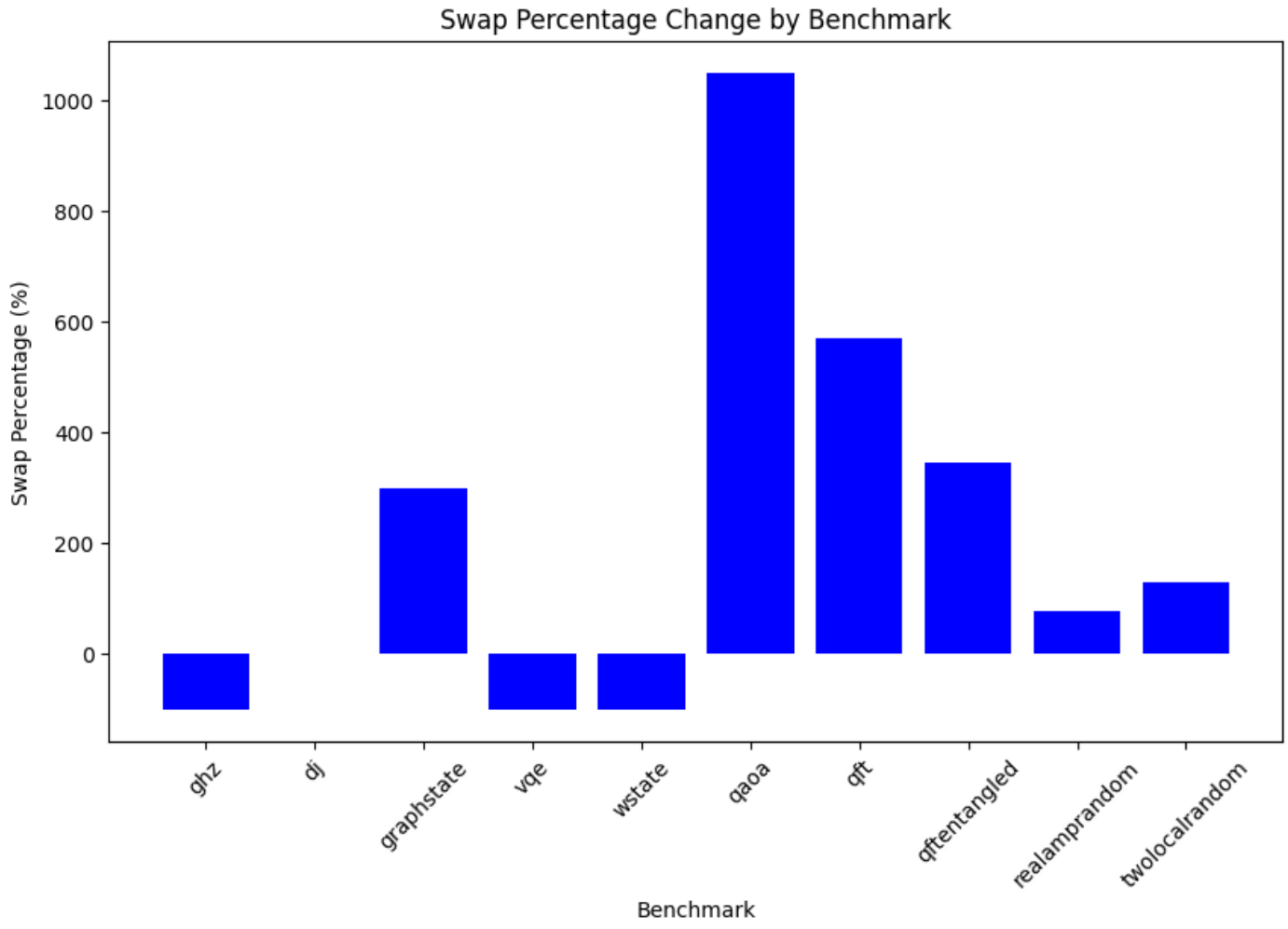


Benchmark Name by layout counts = not every benchmark can be run on certain layout; bar_label = the total number of layout (in table above) that run these algorithms

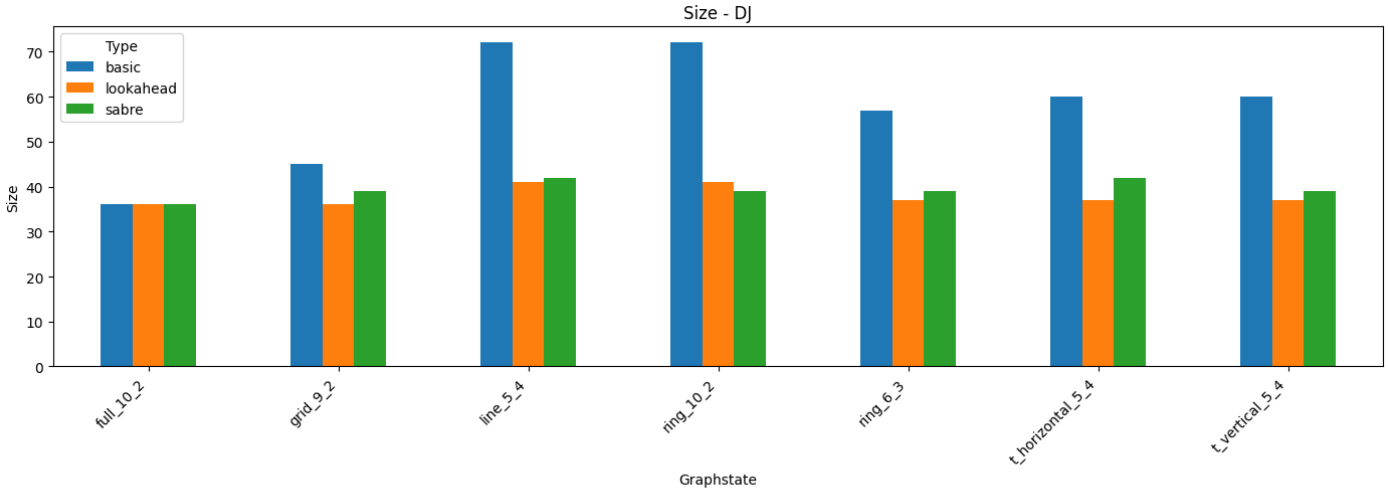
DUMMY TABLE

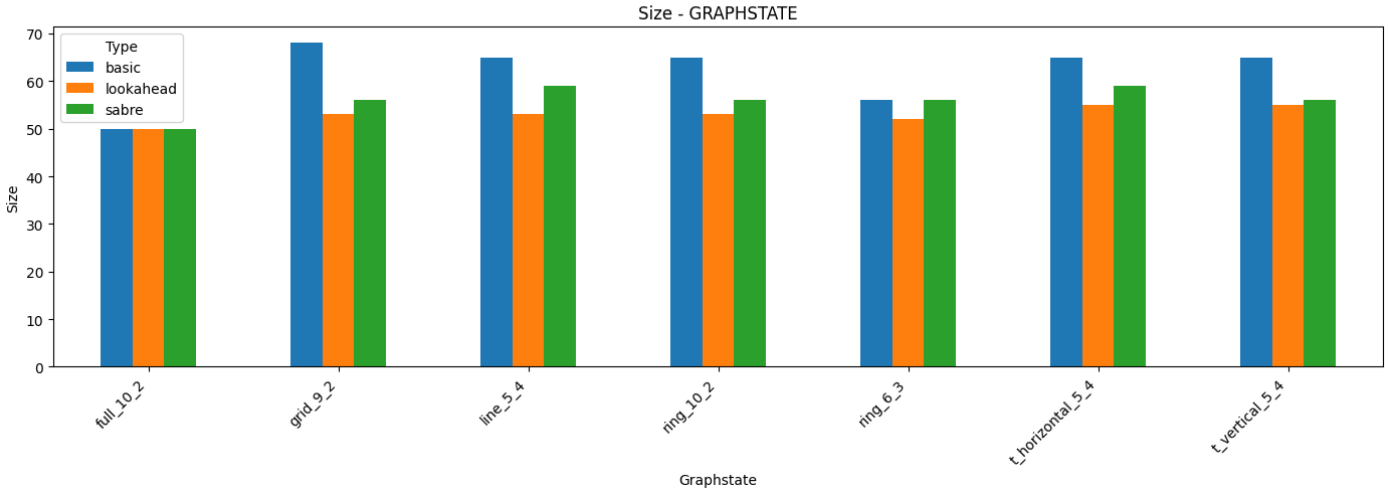


Swap (%) changes **by layout** and depth (%) changes **by layout** for circuit_size = 15



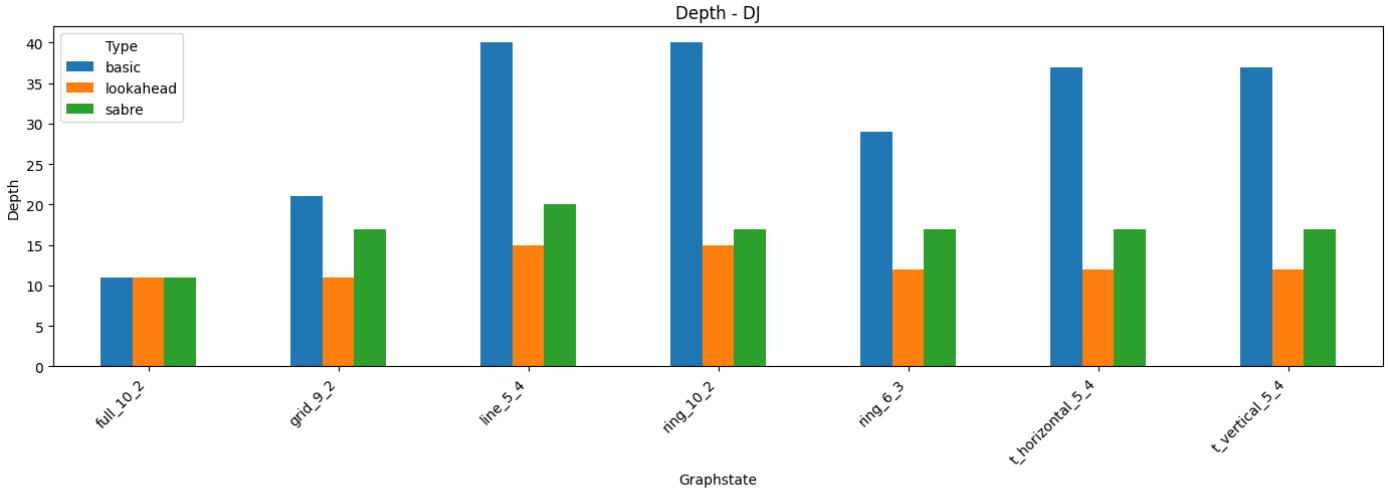
Swap(%) changes group **by benchmark** for circuit_size n = 15

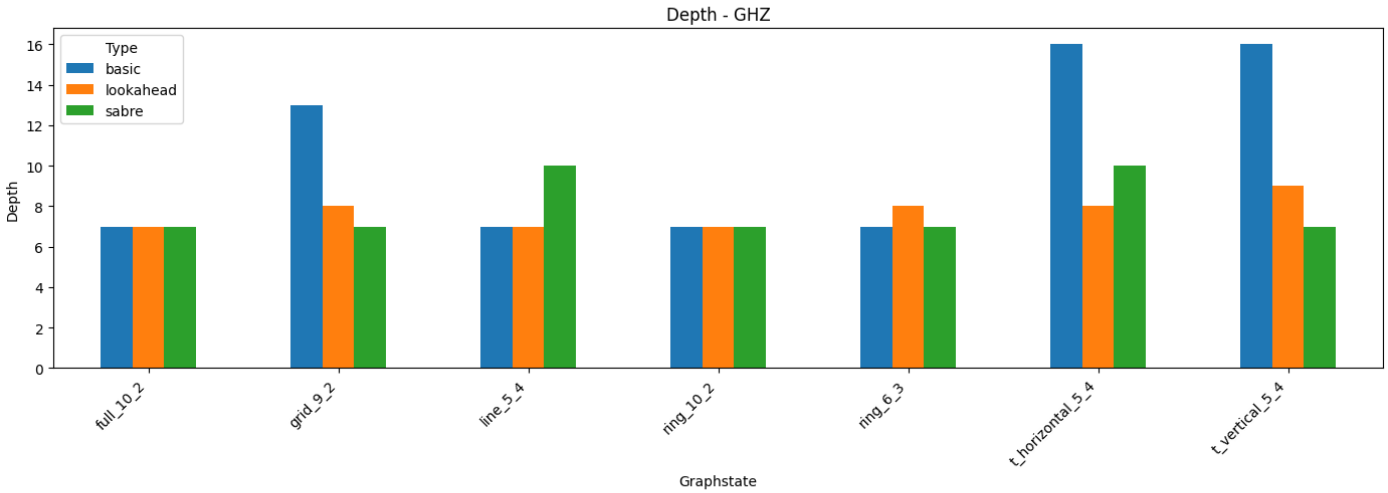


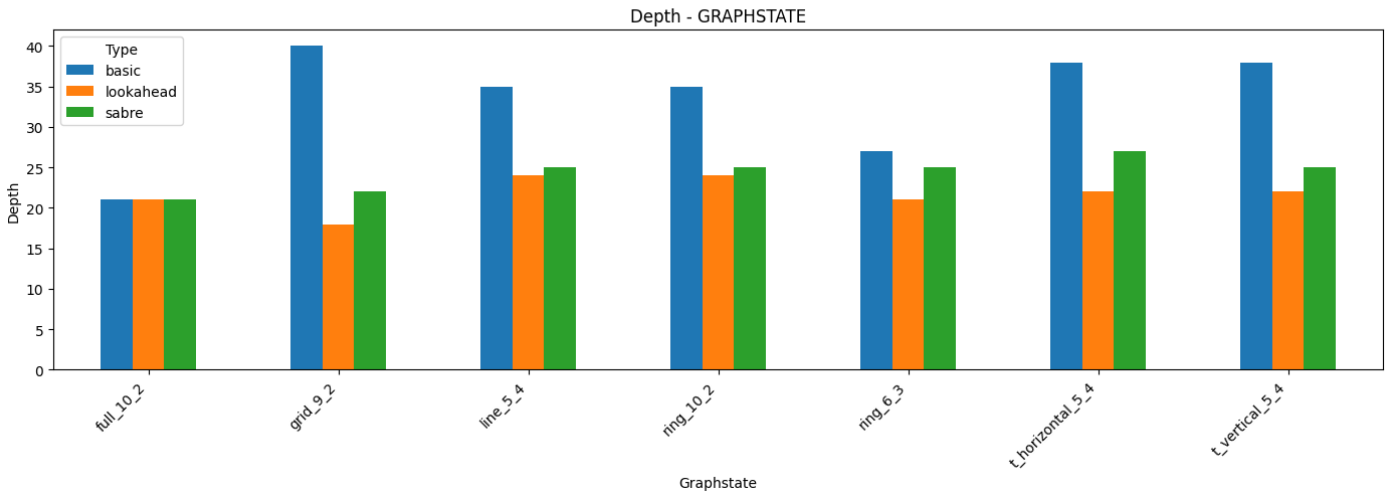


Total operation gates on several algorithms, grouped **by layout**

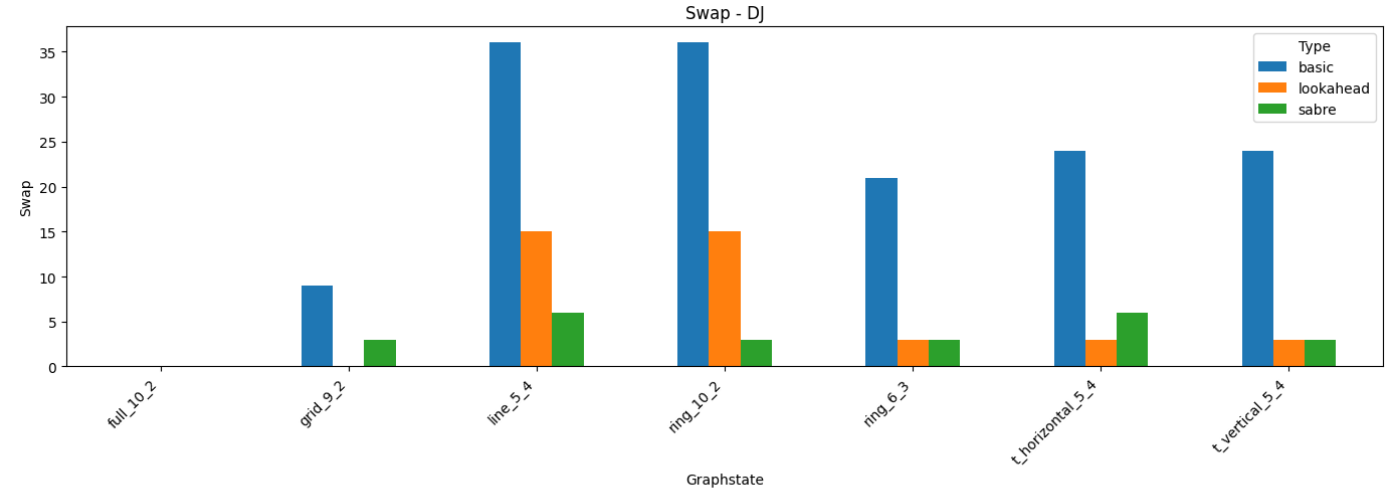
TODO: need to check which 3 suitable algorithms to show this data

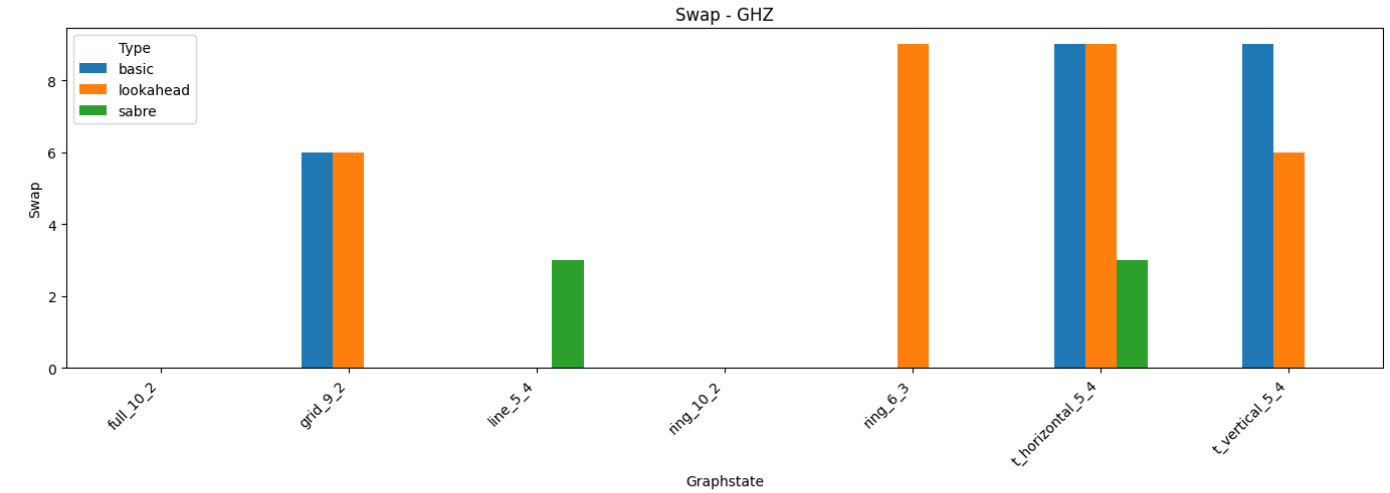


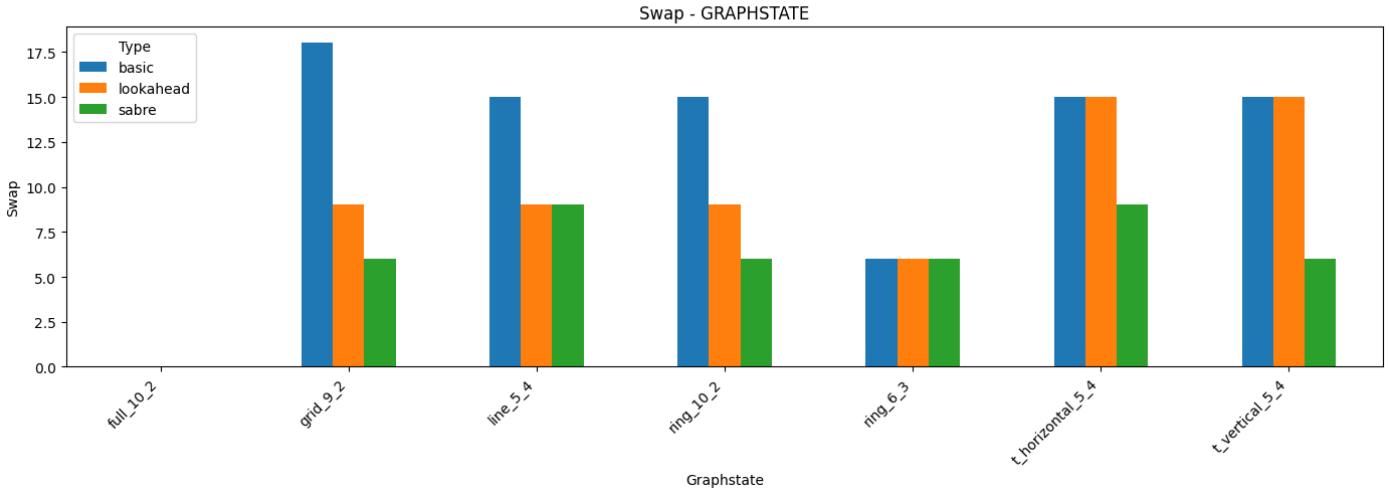




Total gate depth on several algorithms, group **by layout**
TODO: need to check suitable algorithms







Total of additional SWAP, group **by layout**

TODO: better to show additional swap or size? I prefer to show size