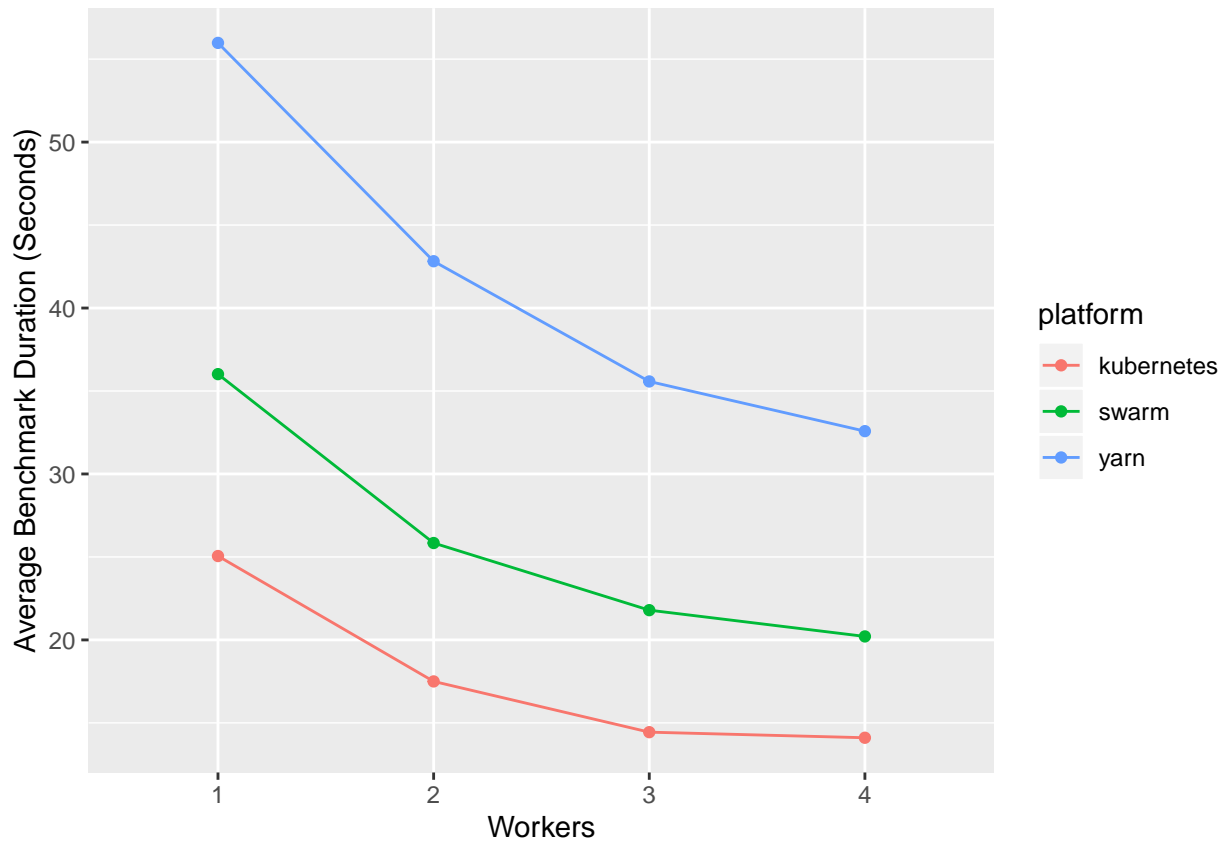
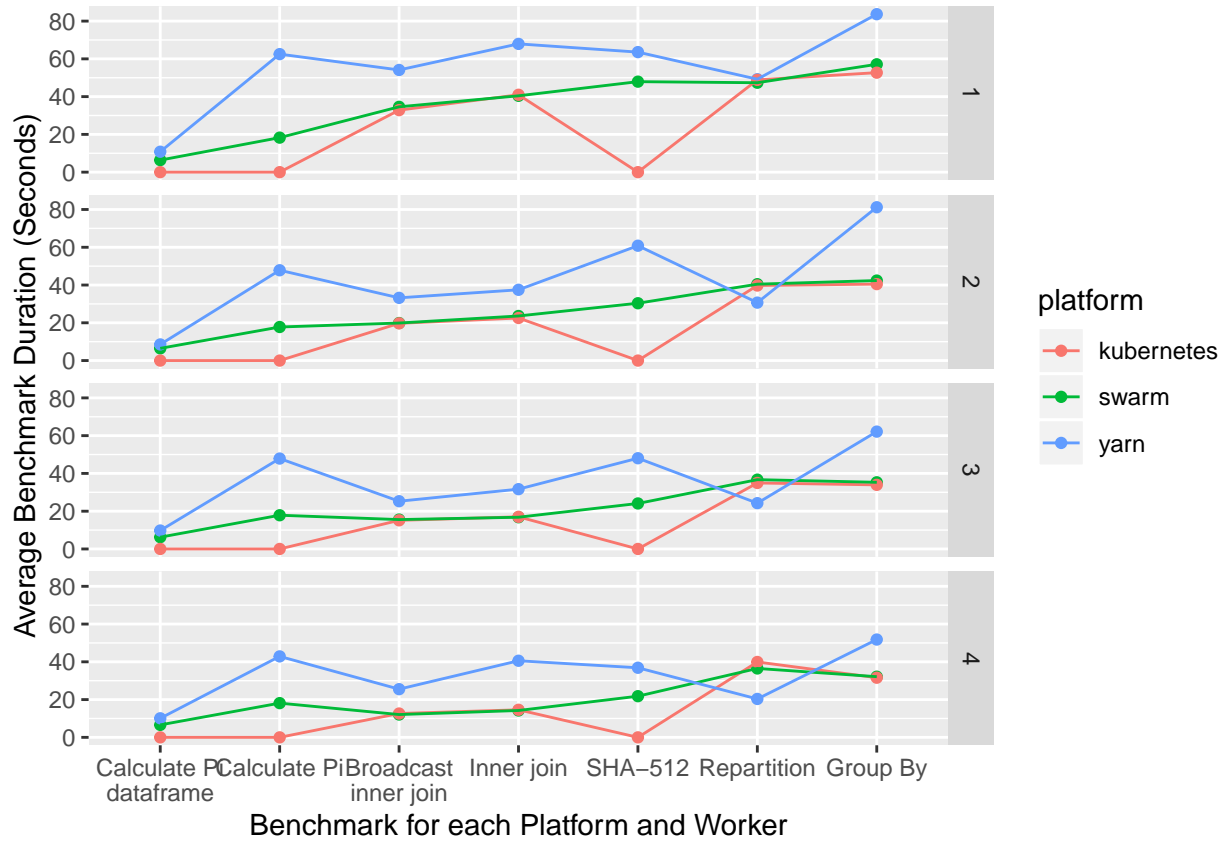


PySpark-Benchmark

```
##  
## Attaching package: 'scales'  
## The following object is masked from 'package:readr':  
##  
##   col_factor
```





##	benchmark	workers	platform	seconds
## 1:	Group By	4	swarm	32.132405
## 2:	Repartition	4	swarm	36.495715
## 3:	Inner join	4	swarm	14.228287
## 4:	Broadcast inner join	4	swarm	12.084065
## 5:	SHA-512	4	swarm	21.801709
## 6:	Calculate Pi	4	swarm	18.127979
## 7:	Calculate Pi dataframe	4	swarm	6.599748
## 8:	Group By	3	swarm	35.301522
## 9:	Repartition	3	swarm	36.700244
## 10:	Inner join	3	swarm	16.799081
## 11:	Broadcast inner join	3	swarm	15.560974
## 12:	SHA-512	3	swarm	24.090170
## 13:	Calculate Pi	3	swarm	17.859944
## 14:	Calculate Pi dataframe	3	swarm	6.239339
## 15:	Group By	2	swarm	42.362474
## 16:	Repartition	2	swarm	40.441895
## 17:	Inner join	2	swarm	23.612223
## 18:	Broadcast inner join	2	swarm	19.866129
## 19:	SHA-512	2	swarm	30.357701
## 20:	Calculate Pi	2	swarm	17.769533
## 21:	Calculate Pi dataframe	2	swarm	6.464988
## 22:	Group By	1	swarm	57.123716
## 23:	Repartition	1	swarm	47.359194
## 24:	Inner join	1	swarm	40.434331
## 25:	Broadcast inner join	1	swarm	34.599507
## 26:	SHA-512	1	swarm	47.925313

## 27:	Calculate Pi	1	swarm	18.286174
## 28:	Calculate Pi dataframe	1	swarm	6.381473
## 29:	Group By	4	yarn	51.800268
## 30:	Repartition	4	yarn	20.342610
## 31:	Inner join	4	yarn	40.568093
## 32:	Broadcast inner join	4	yarn	25.523503
## 33:	SHA-512	4	yarn	36.856140
## 34:	Calculate Pi	4	yarn	42.880719
## 35:	Calculate Pi dataframe	4	yarn	10.091344
## 36:	Group By	3	yarn	62.135808
## 37:	Repartition	3	yarn	24.255938
## 38:	Inner join	3	yarn	31.669951
## 39:	Broadcast inner join	3	yarn	25.277192
## 40:	SHA-512	3	yarn	48.053262
## 41:	Calculate Pi	3	yarn	47.879126
## 42:	Calculate Pi dataframe	3	yarn	9.755213
## 43:	Group By	2	yarn	81.188789
## 44:	Repartition	2	yarn	30.677414
## 45:	Inner join	2	yarn	37.473158
## 46:	Broadcast inner join	2	yarn	33.213614
## 47:	SHA-512	2	yarn	60.826048
## 48:	Calculate Pi	2	yarn	47.831836
## 49:	Calculate Pi dataframe	2	yarn	8.532428
## 50:	Group By	1	yarn	83.665880
## 51:	Repartition	1	yarn	49.218491
## 52:	Inner join	1	yarn	67.929862
## 53:	Broadcast inner join	1	yarn	54.122219
## 54:	SHA-512	1	yarn	63.573516
## 55:	Calculate Pi	1	yarn	62.505460
## 56:	Calculate Pi dataframe	1	yarn	10.823174
## 57:	Group By	4	kubernetes	31.591970
## 58:	Repartition	4	kubernetes	39.915214
## 59:	Inner join	4	kubernetes	14.597409
## 60:	Broadcast inner join	4	kubernetes	12.629441
## 61:	SHA-512	4	kubernetes	0.000000
## 62:	Calculate Pi	4	kubernetes	0.000000
## 63:	Calculate Pi dataframe	4	kubernetes	0.000000
## 64:	Group By	3	kubernetes	33.951357
## 65:	Repartition	3	kubernetes	34.955504
## 66:	Inner join	3	kubernetes	17.008884
## 67:	Broadcast inner join	3	kubernetes	15.167445
## 68:	SHA-512	3	kubernetes	0.000000
## 69:	Calculate Pi	3	kubernetes	0.000000
## 70:	Calculate Pi dataframe	3	kubernetes	0.000000
## 71:	Group By	2	kubernetes	40.487864
## 72:	Repartition	2	kubernetes	39.740077
## 73:	Inner join	2	kubernetes	22.544939
## 74:	Broadcast inner join	2	kubernetes	19.715776
## 75:	SHA-512	2	kubernetes	0.000000
## 76:	Calculate Pi	2	kubernetes	0.000000
## 77:	Calculate Pi dataframe	2	kubernetes	0.000000
## 78:	Group By	1	kubernetes	52.695373
## 79:	Repartition	1	kubernetes	48.875651
## 80:	Inner join	1	kubernetes	40.975831

## 81:	Broadcast inner join	1	kubernetes	32.836951
## 82:	SHA-512	1	kubernetes	0.000000
## 83:	Calculate Pi	1	kubernetes	0.000000
## 84:	Calculate Pi dataframe	1	kubernetes	0.000000
##	benchmark workers		platform	seconds