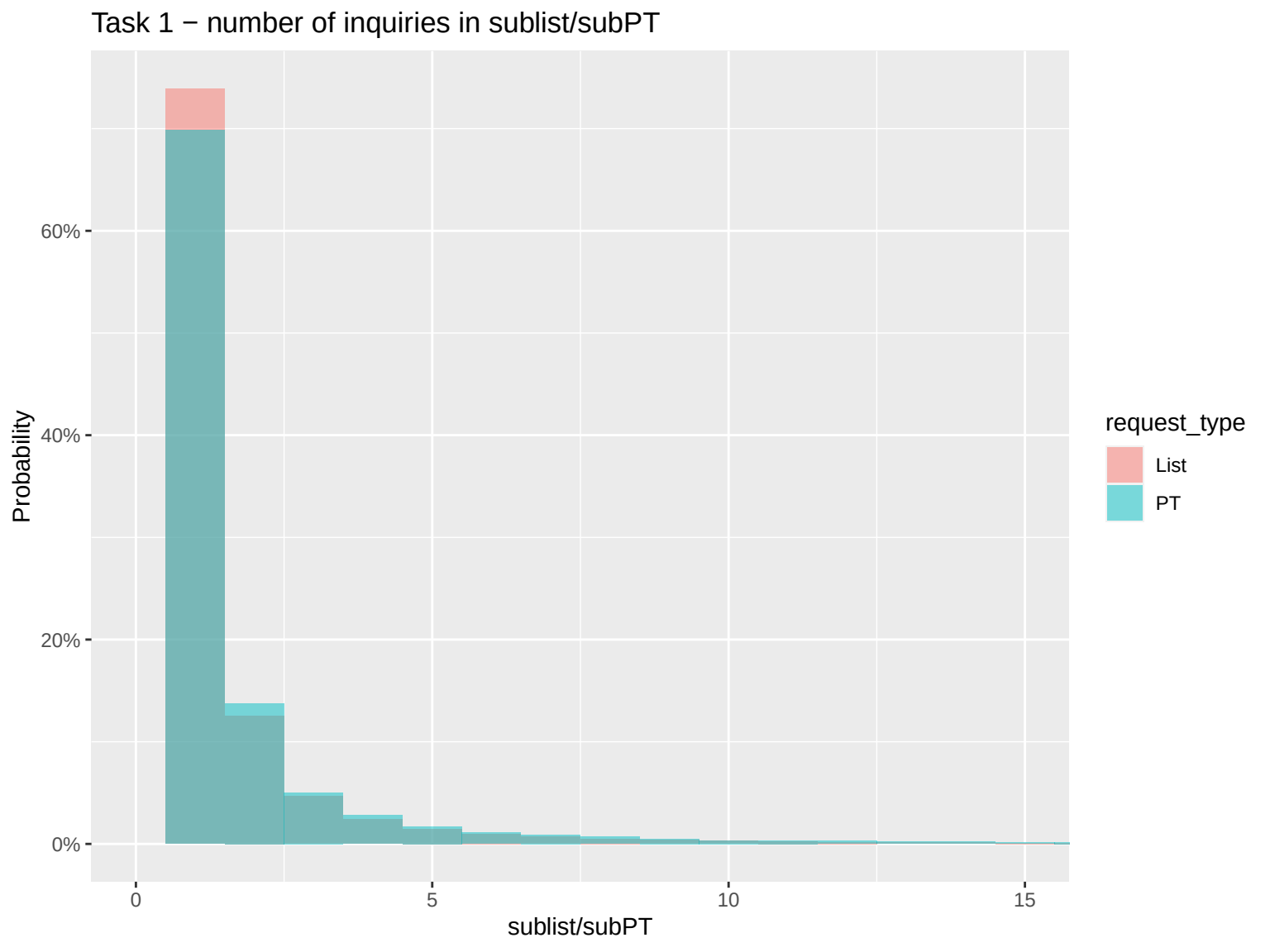
TASK #1

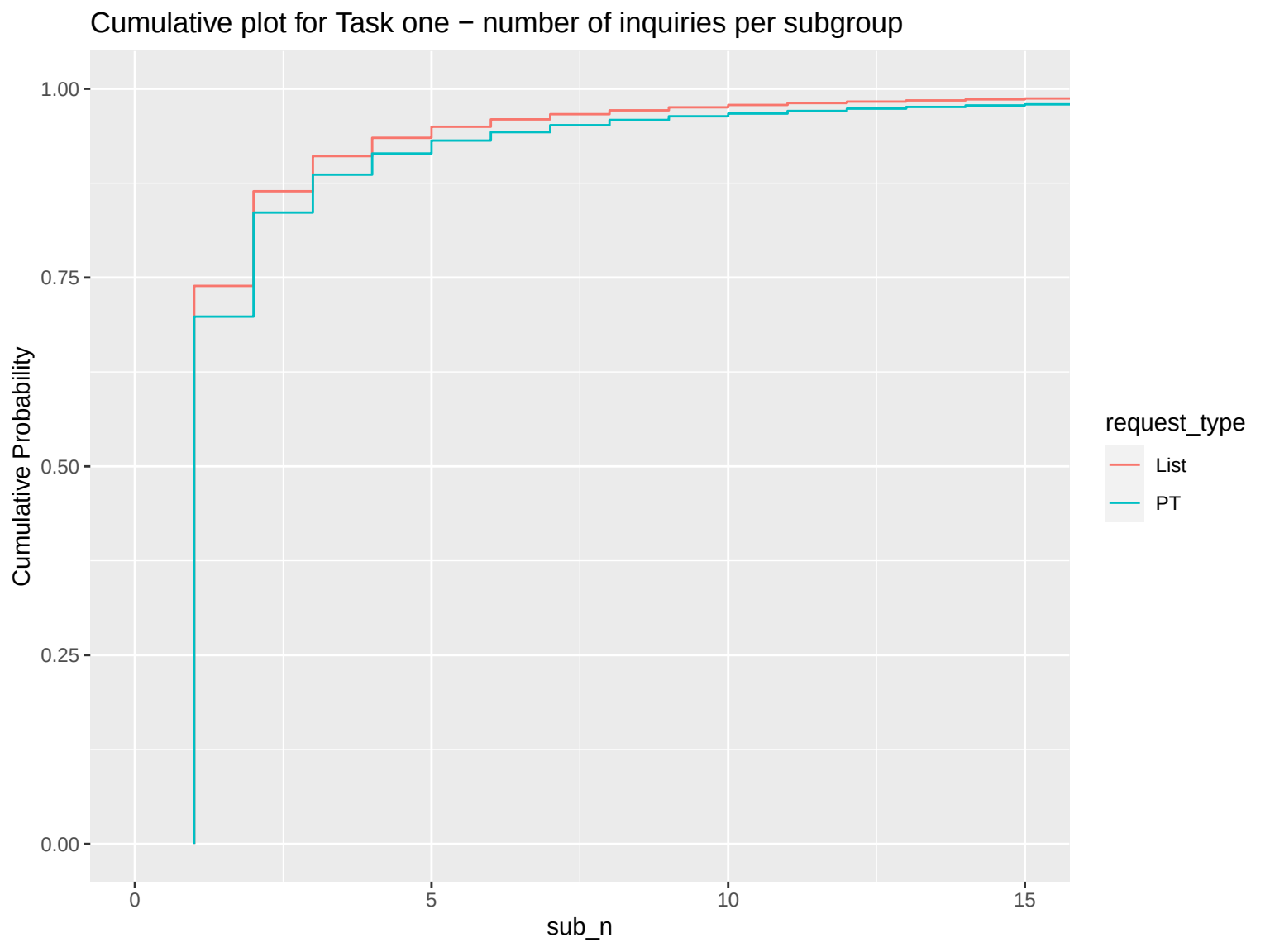
We wish to see the distribution of sublists and subPTs as follows:
a sublist or subPT consists of all groups of inquiries in a request
that shares the exactly the same requested quantity. E.g., if a PT has 3 inquiries,
each w different quantities, then there are 3 subPTs in the PT, and if all three
shares the same quantity, then there's 1 subPT. Please provide the histogram(s)
and sum stats tables of sublists and subPTs by the number of inquiries in each,
perhaps overlapping for easy comparison.

TASK #2

We want to know the proportion of each list or PT that are in nonsingleton
sublists or subPTs. To do this, compute for each request the percent of inquiries
that has at least one other inquiry in the same request that has the same request
quantity. Then create histograms and sum stats tables as in 1.

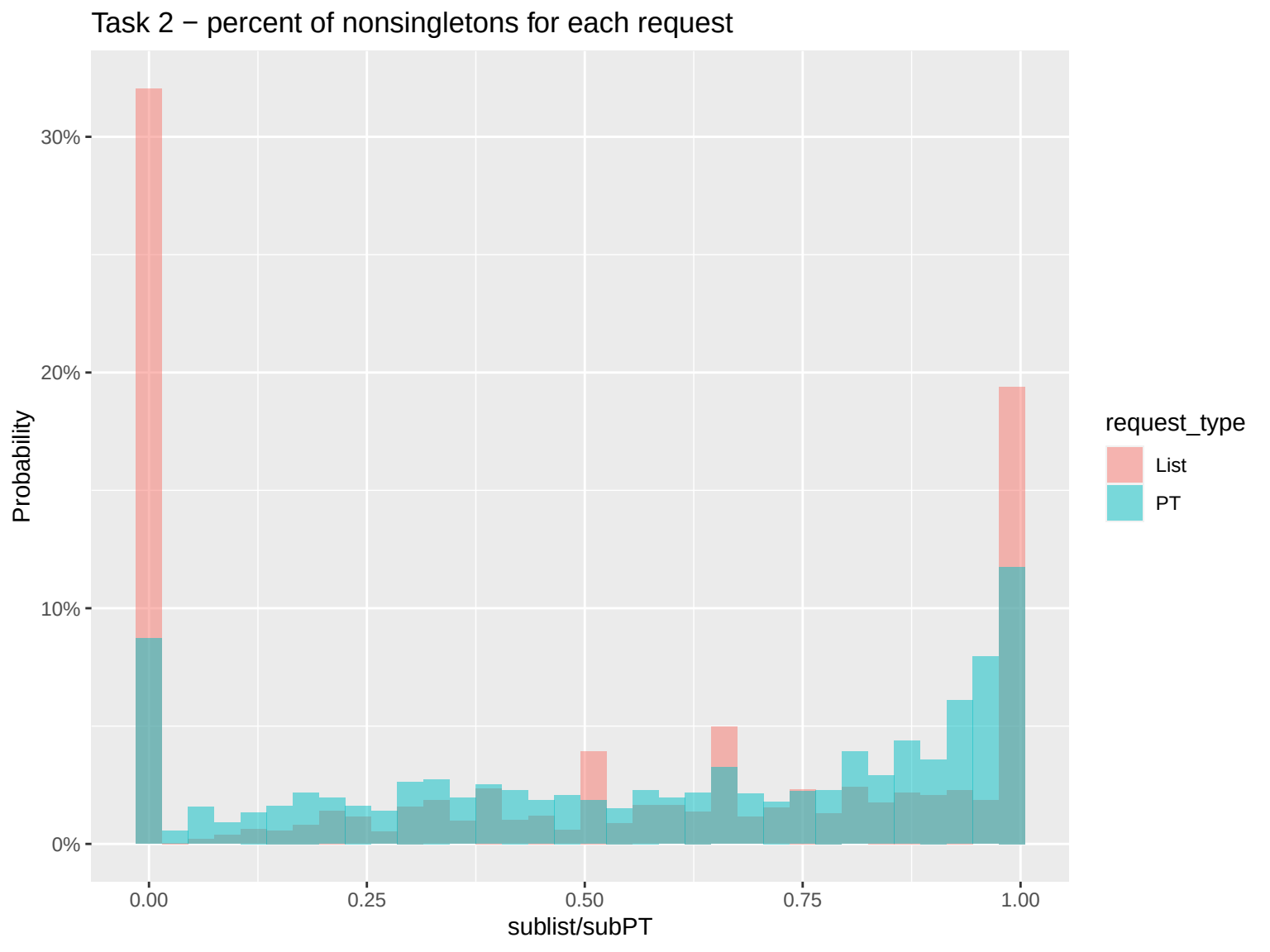
The code that led to this report can be found here:
https://github.com/DavidM199/Portfolio_Trades/blob/f01c15b5218f6dd885926ea9c90d45f93eec48ea/R/sublist_subPT.R

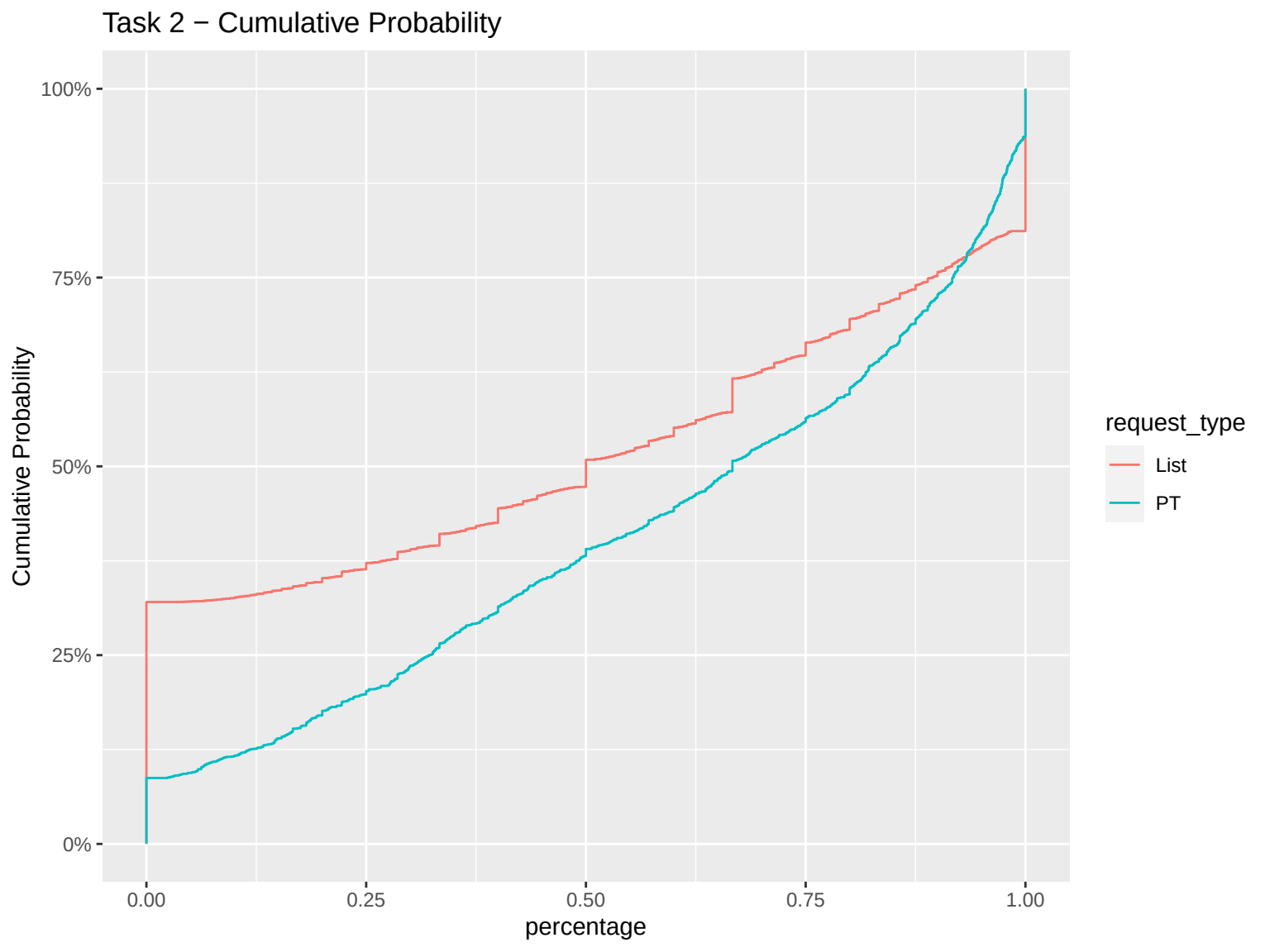

Task 1 − number of inquiries in sublist/subPT
Probability
60%
40%
20%
0%
0
5
10
15
sublist/subPT
request_type
List
PT


Cumulative plot for Task one − number of inquiries per subgroup
1.00
0.75
0.50
0.25
0.00
Cumulative Probability
0
5
10
15
sub_n
request_type
List
PT

Sum stats Task 1 − number of subs per request

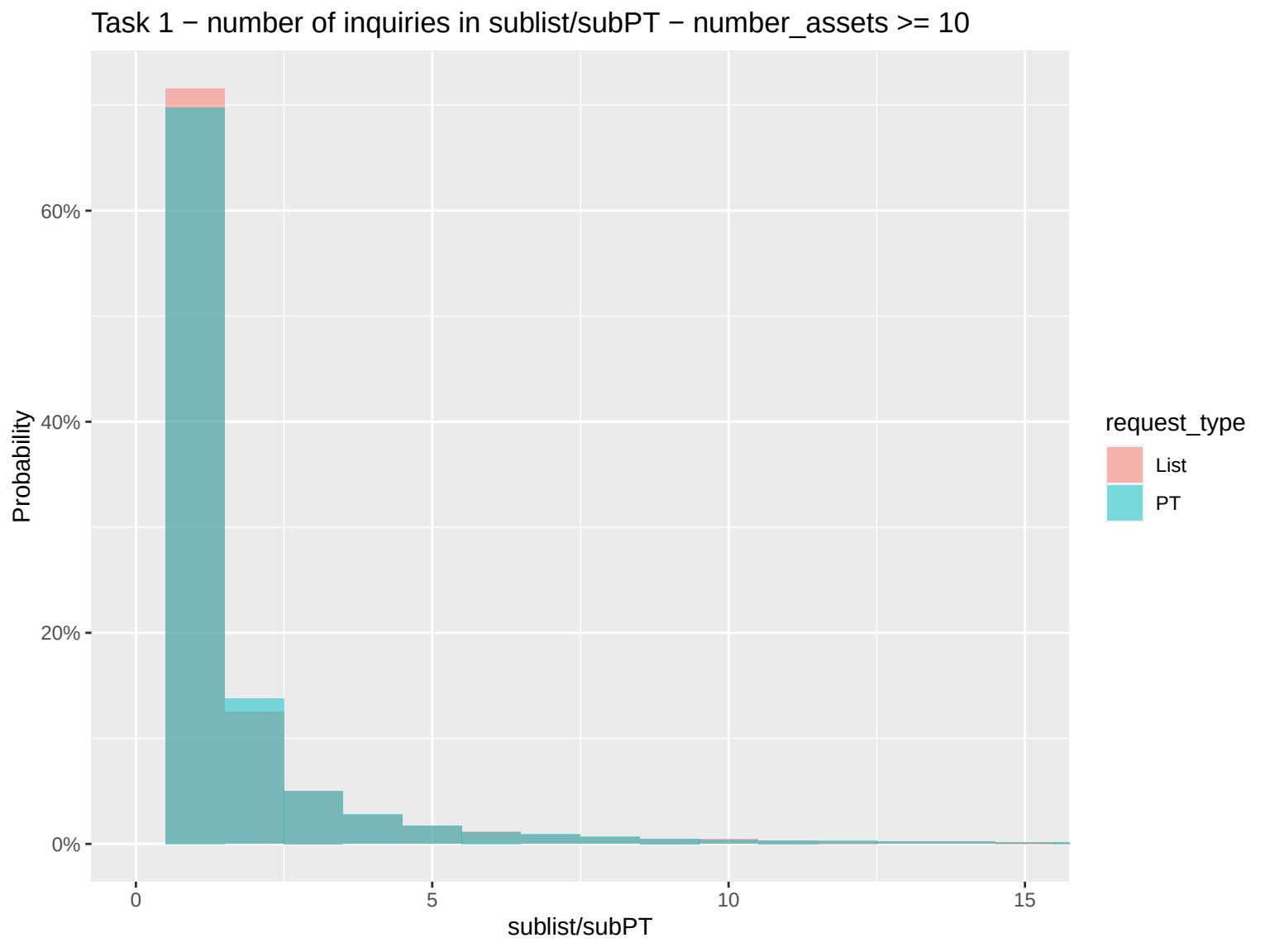
	request_type	Mean	SD	p1	p5	p10	p50	p90	p95	p99
1	List	2.007	3.843	1	1	1	1	3	6	19
2	PT	2.645	9.880	1	1	1	1	4	7	28

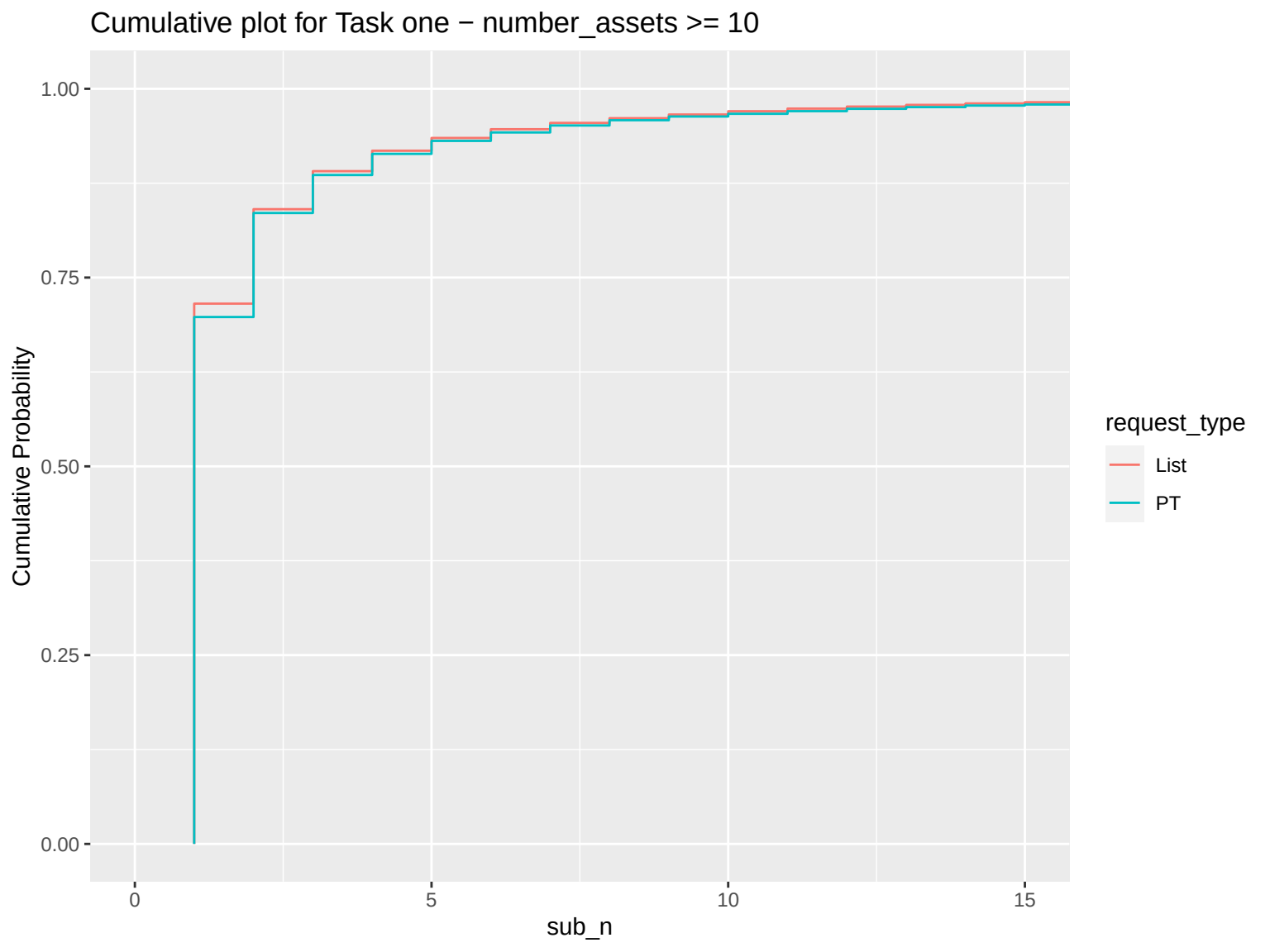

Task 2 − percent of nonsingletons for each request
30%
20%
10%
0%
Probability
0.00
0.25
0.50
0.75
1.00
sublist/subPT
request_type
List
PT


Task 2 − Cumulative Probability
100%
75%
50%
25%
0%
Cumulative Probability
0.00
0.25
0.50
0.75
1.00
percentage
request_type
List
PT

Sum stats Task 2 − percent of nonsingletons per request

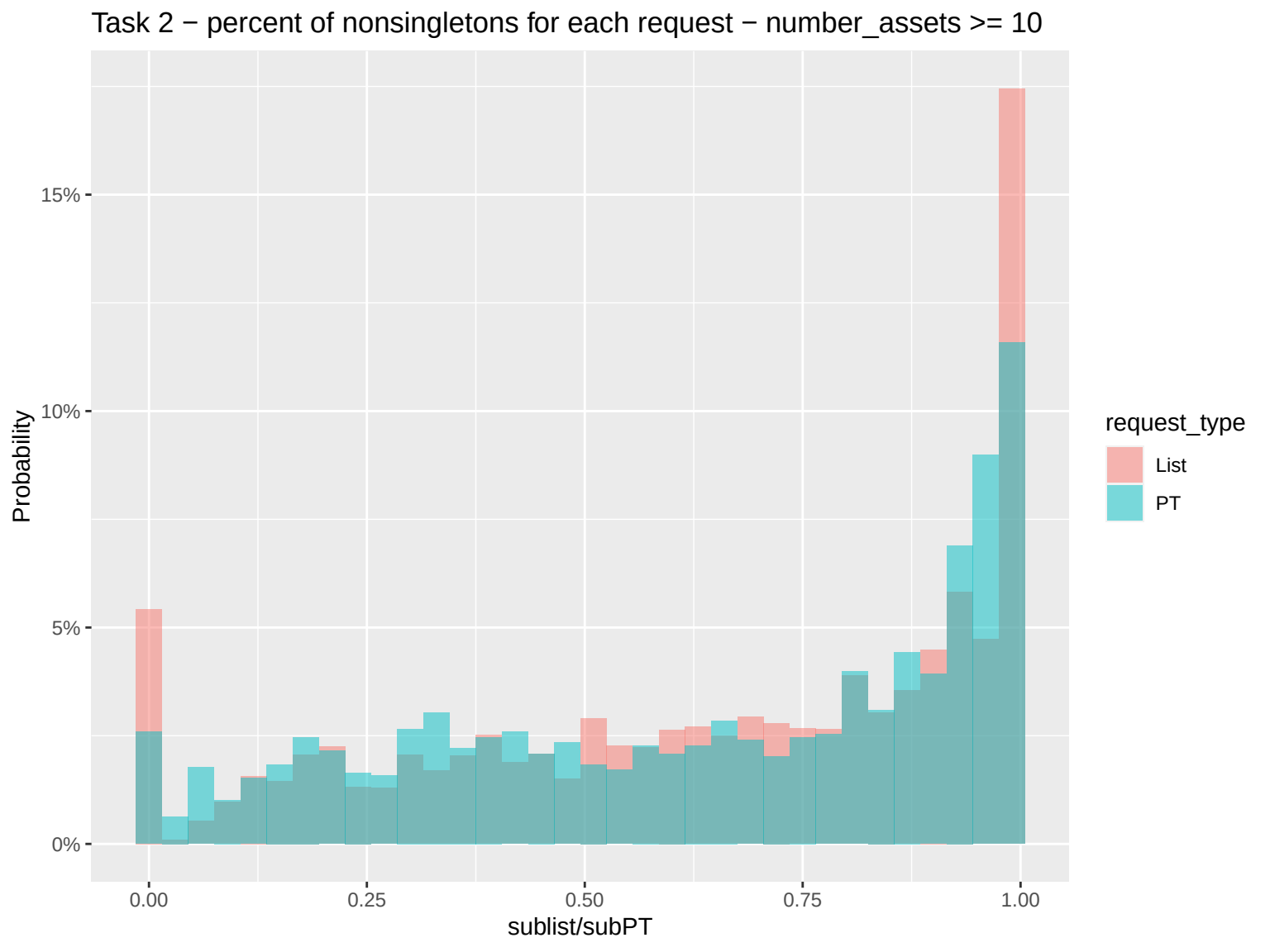
	request_type	Mean	SD	p1	p5	p10	p50	p90	p95	p99
1	List	0.484	0.400	0	0	0.000	0.500	1.000	1	1
2	PT	0.600	0.335	0	0	0.062	0.667	0.981	1	1

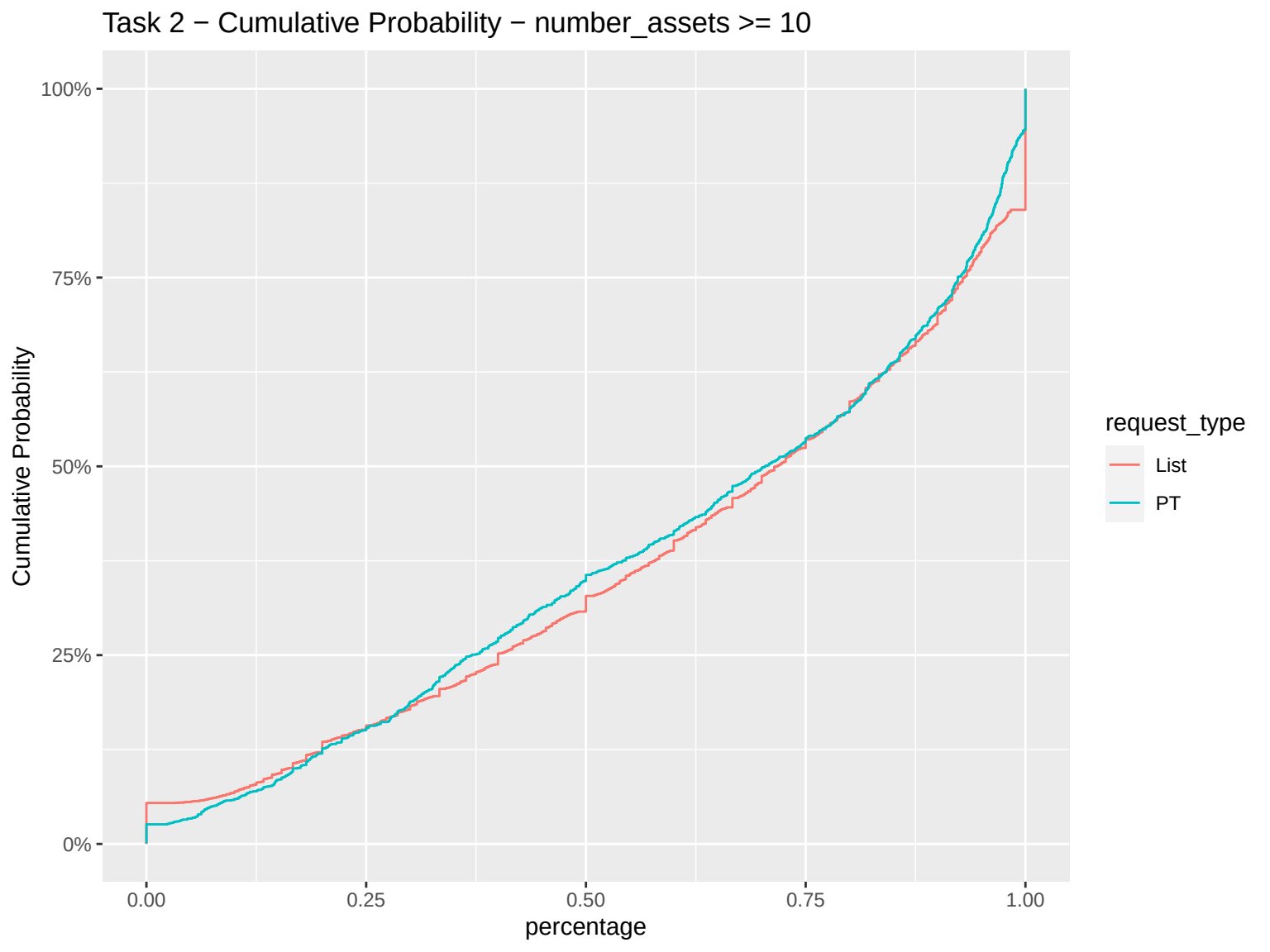

Task 1 − number of inquiries in sublist/subPT − number_assets >= 10
Probability
60%
40%
20%
0%
0
5
10
15
sublist/subPT
request_type
List
PT


Cumulative plot for Task one − number_assets >= 10
1.00
0.75
0.50
0.25
0.00
Cumulative Probability
0
5
10
15
sub_n
request_type
List
PT

Sum stats Task 1 − number of subs per request

	request_type	Mean	SD	p1	p5	p10	p50	p90	p95	p99
1	List	2.259	4.464	1	1	1	1	4	7	24
2	PT	2.656	9.921	1	1	1	1	4	7	28


Task 2 − percent of nonsingletons for each request − number_assets >= 10
Probability
15%
10%
5%
0%
0.00
0.25
0.50
0.75
1.00
sublist/subPT
request_type
List
PT


Task 2 − Cumulative Probability − number_assets >= 10
100%
75%
50%
25%
0%
Cumulative Probability
0.00
0.25
0.50
0.75
1.00
percentage
request_type
List
PT

Sum stats Task 2 − percent of nonsingletons per request

	request_type	Mean	SD	p1	p5	p10	p50	p90	p95	p99
1	List	0.646	0.313	0	0.000	0.162	0.717	1.000	1	1
2	PT	0.636	0.308	0	0.077	0.171	0.704	0.979	1	1