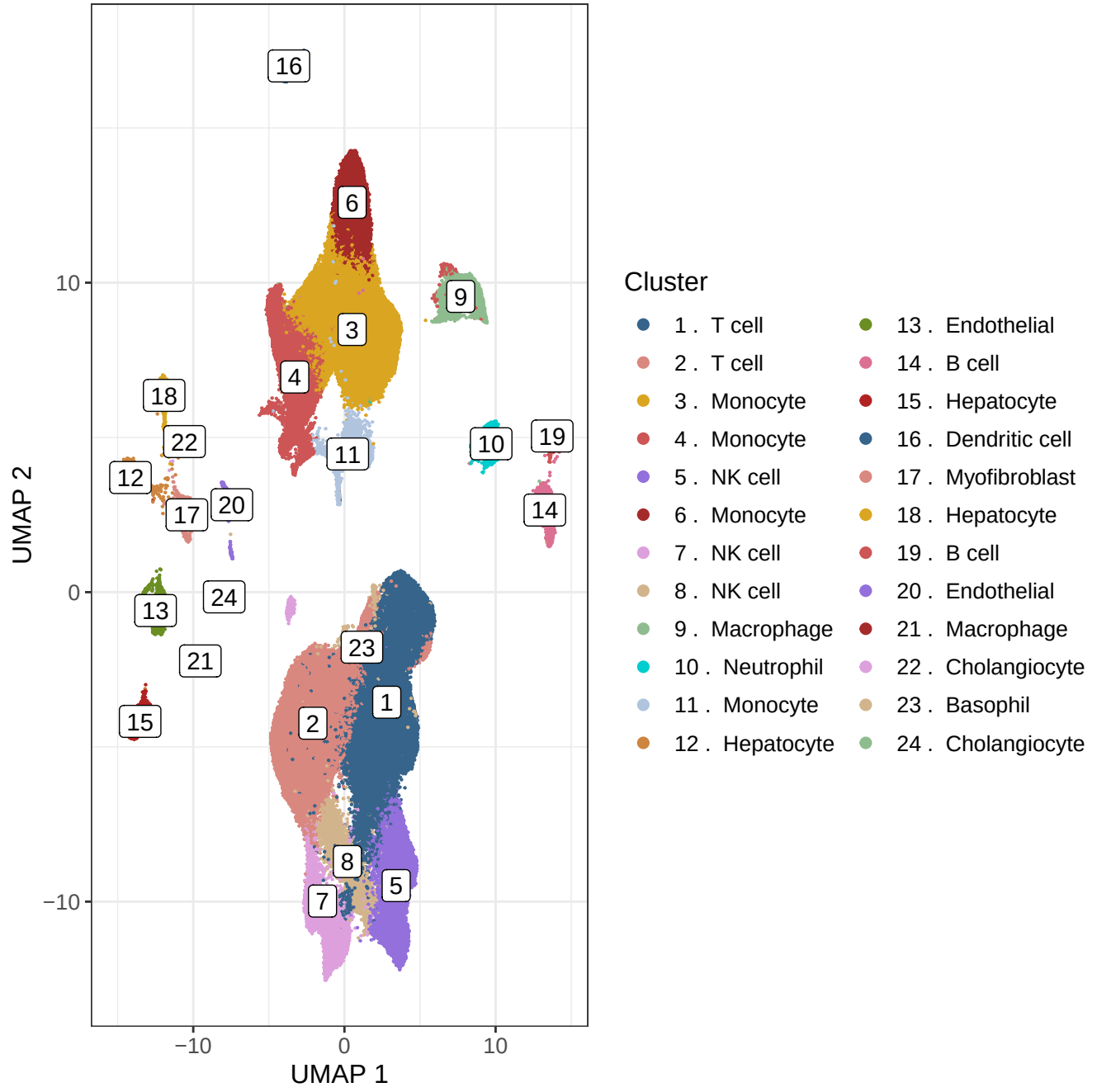
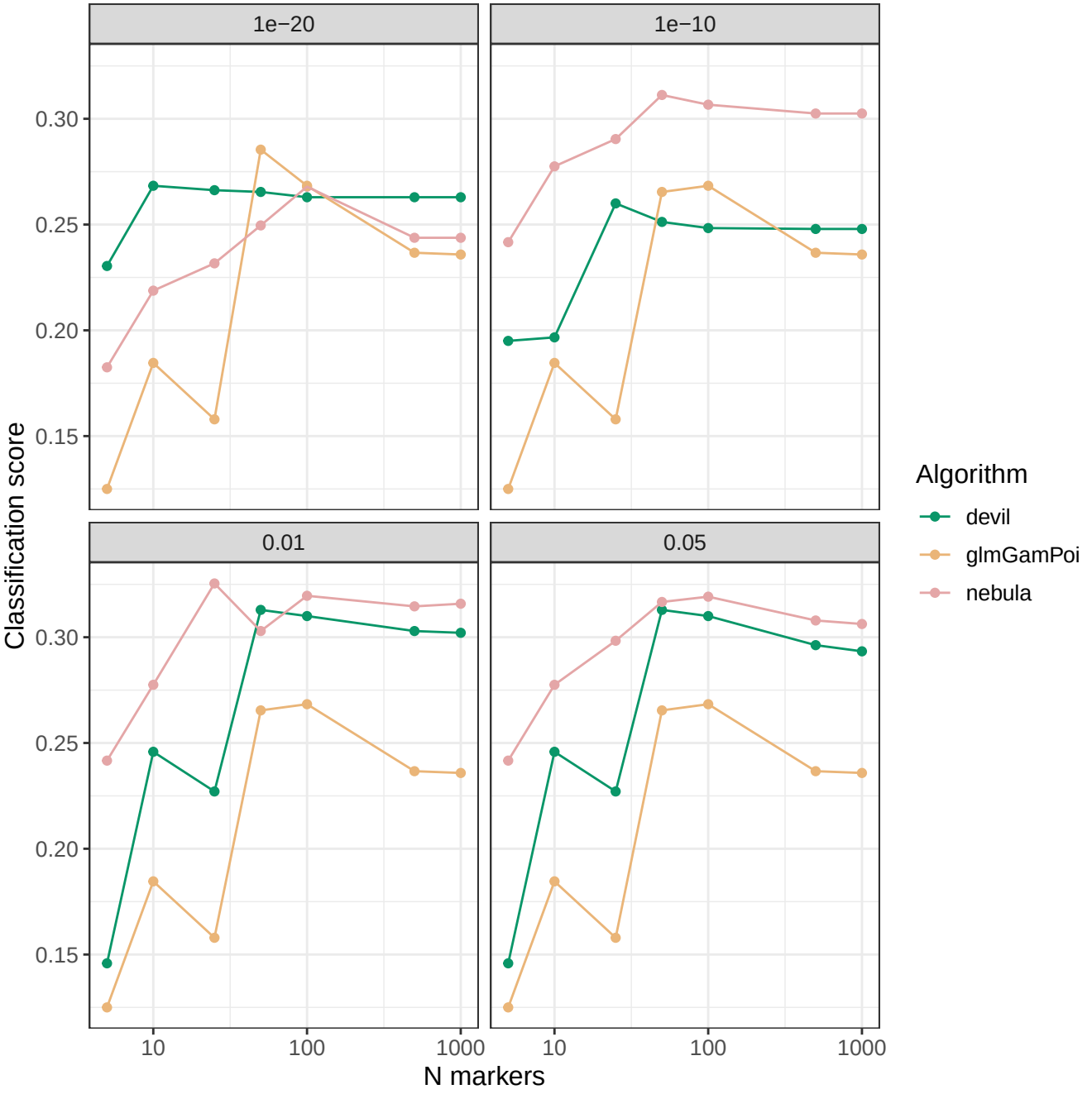

16
6
9
3
4
18
22
11
10
19
12
20
17
14
13
24
23
21
1
15
2
8
5
7
10
0
−10
−10
0
10
UMAP 2
UMAP 1
Cluster
1 . T cell
2 . T cell
3 . Monocyte
4 . Monocyte
5 . NK cell
6 . Monocyte
7 . NK cell
8 . NK cell
9 . Macrophage
10 . Neutrophil
11 . Monocyte
12 . Hepatocyte
13 . Endothelial
14 . B cell
15 . Hepatocyte
16 . Dendritic cell
17 . Myofibroblast
18 . Hepatocyte
19 . B cell
20 . Endothelial
21 . Macrophage
22 . Cholangiocyte
23 . Basophil
24 . Cholangiocyte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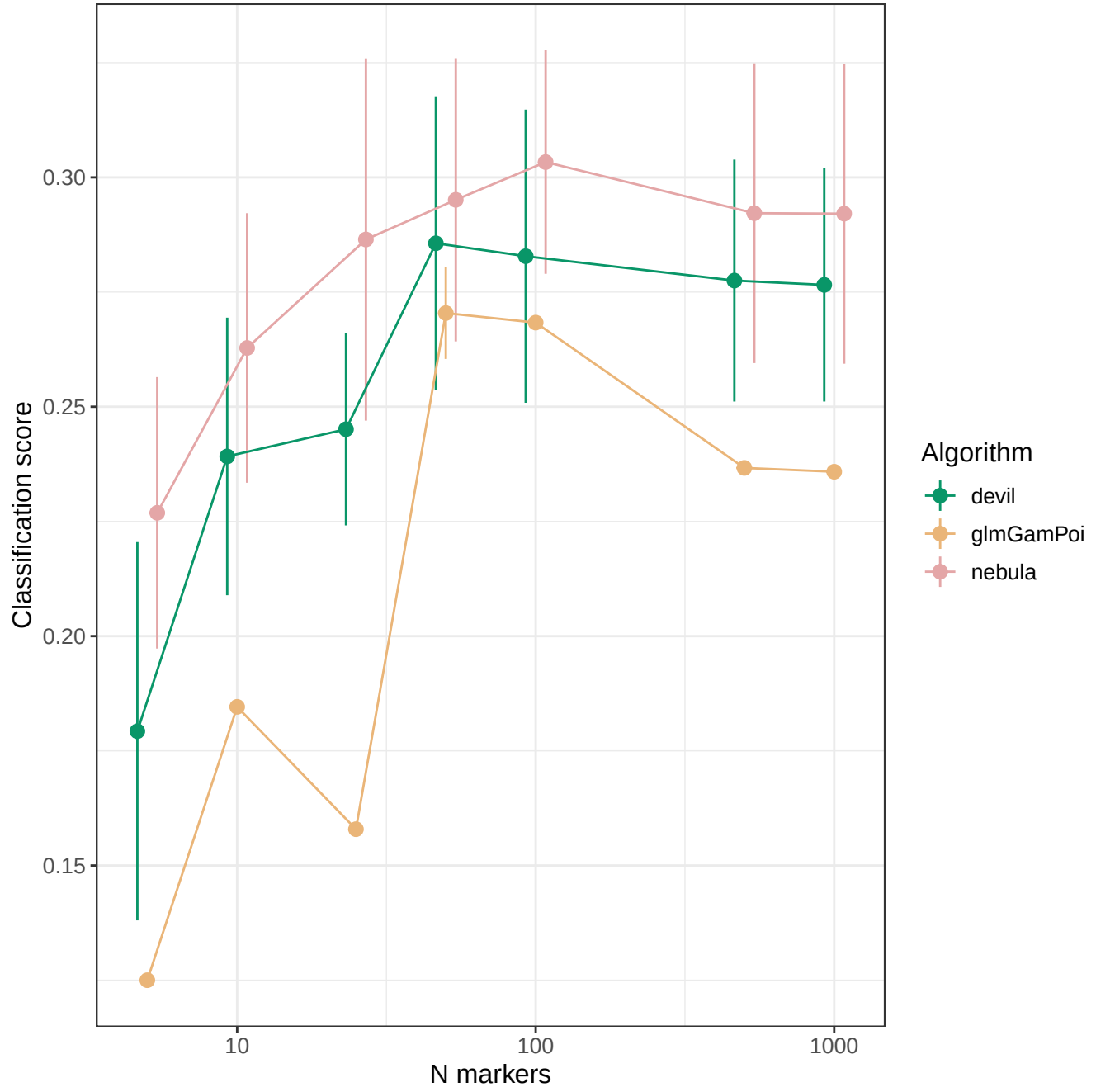
1e−10
0.01
0.05
0.30
0.25
0.20
0.15
Classification score
10
100
1000
N markers
Algorithm
devil
glmGamPoi
nebula


Classification score
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10
100
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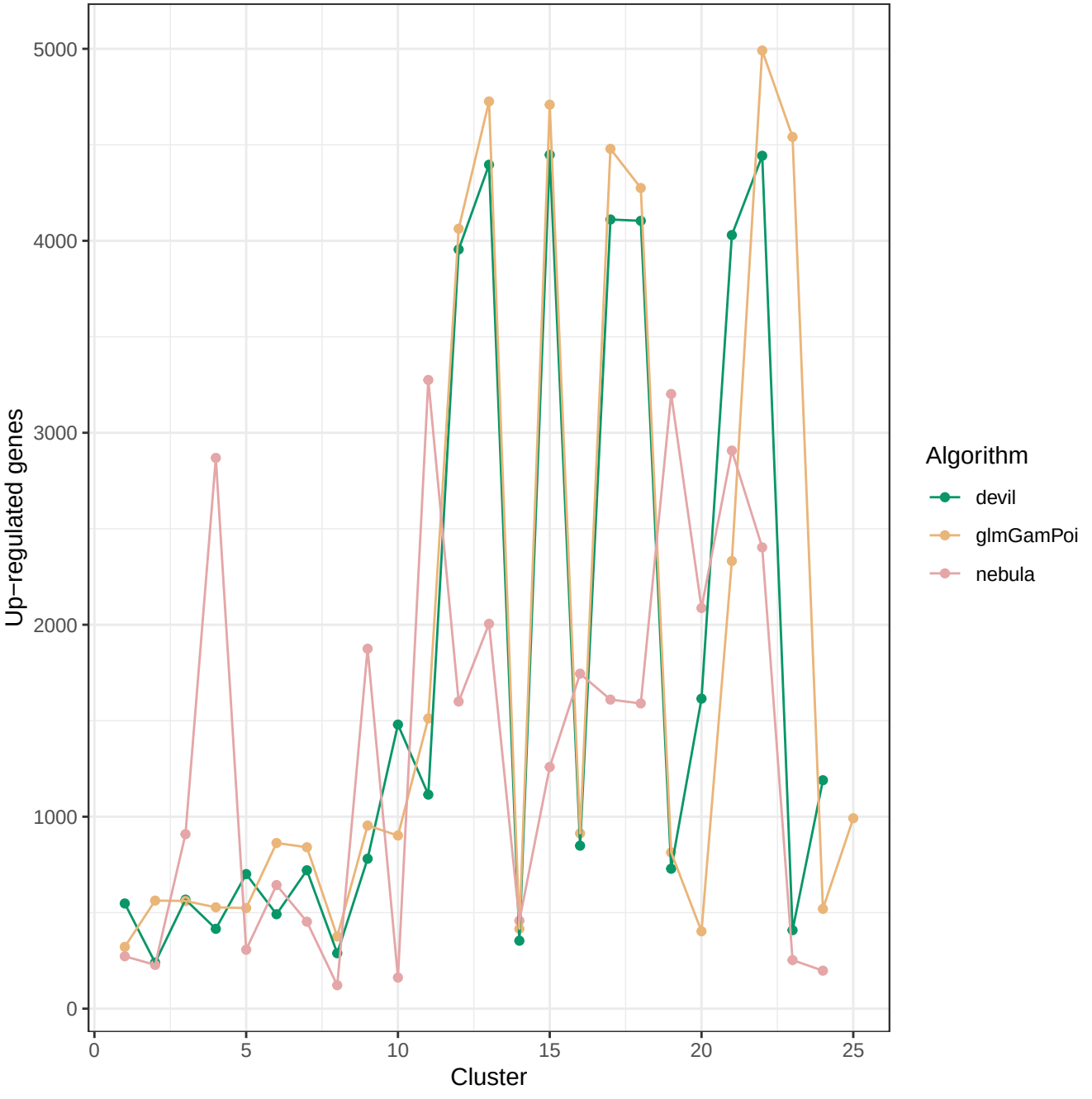
N markers
Algorithm
devil
glmGamPoi
nebula


Up−regulated genes
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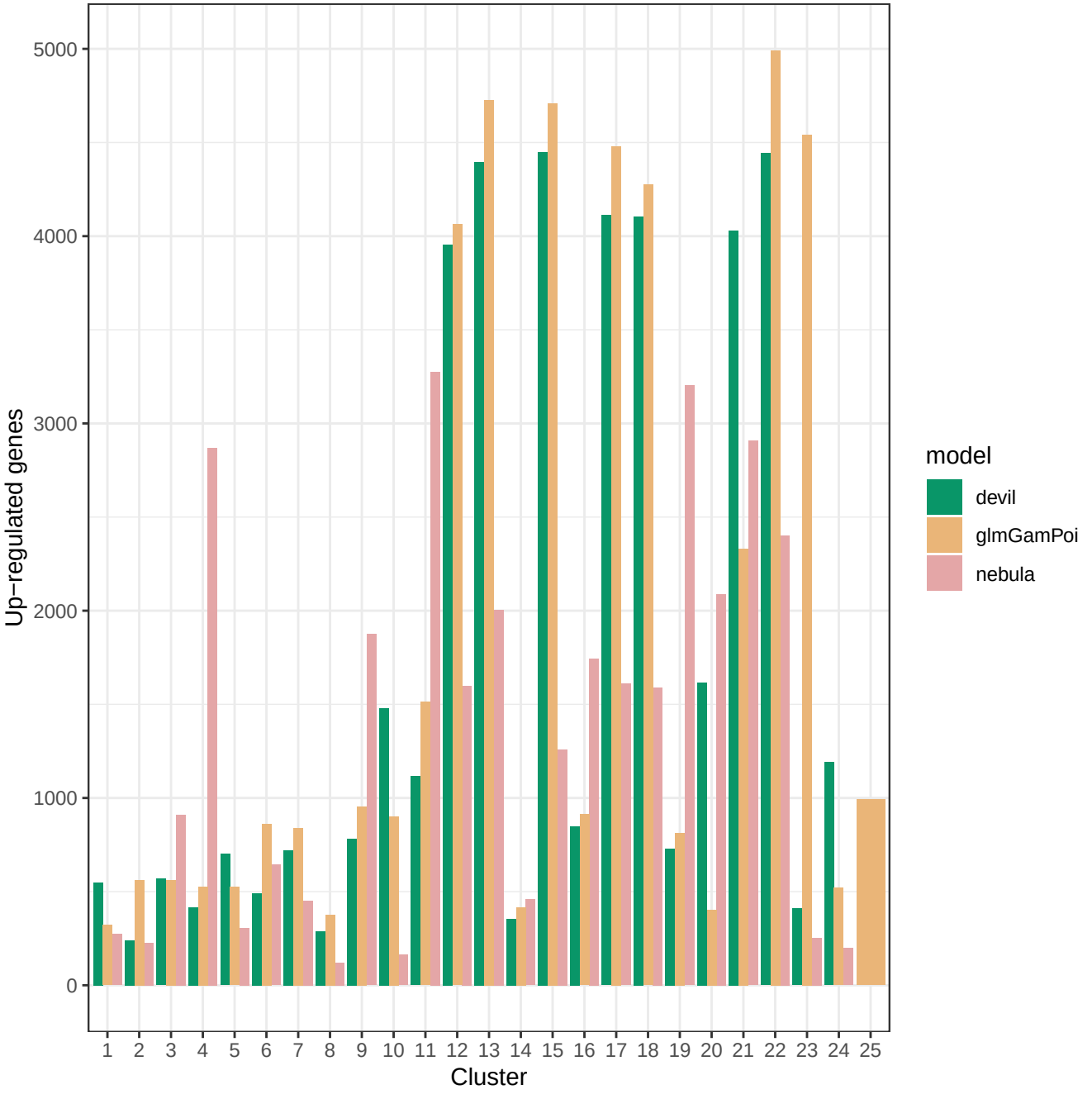
4000
3000
2000
1000
0
0
5
10
15
20
25
Cluster
Algorithm
devil
glmGamPoi
nebula


Up−regulated genes
5000
4000
3000
2000
1000
0
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
Cluster
model
devil
glmGamPoi
nebula