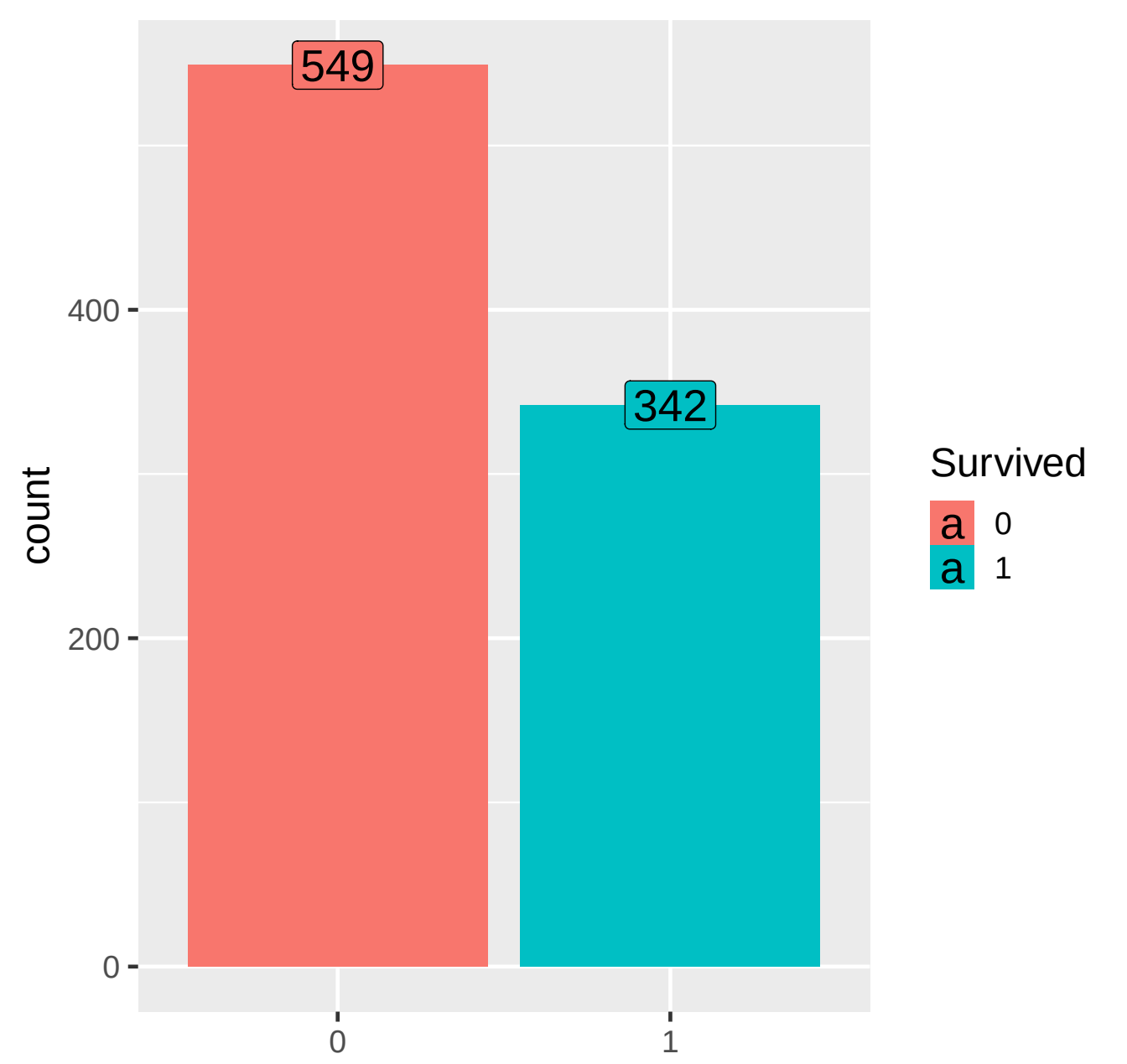
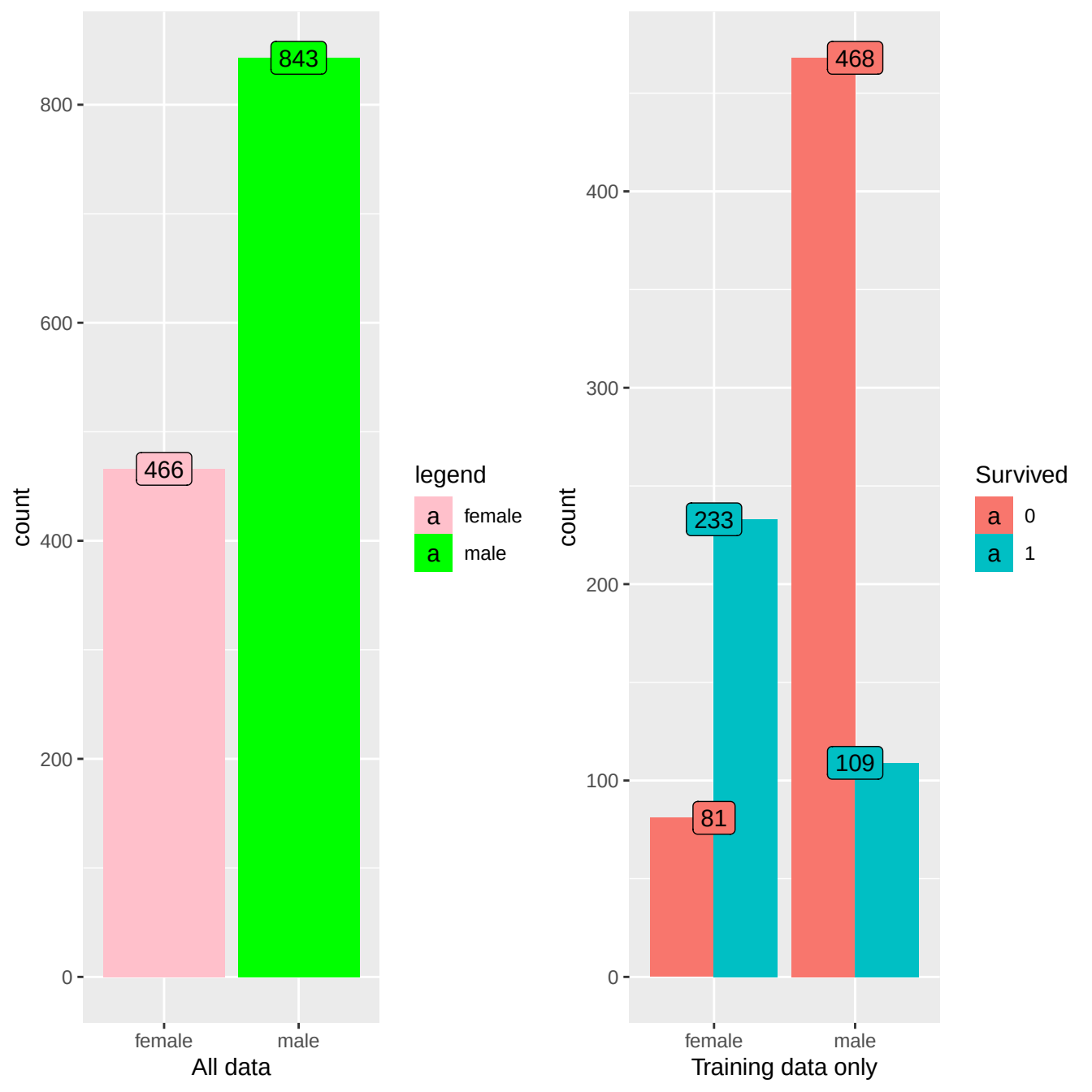
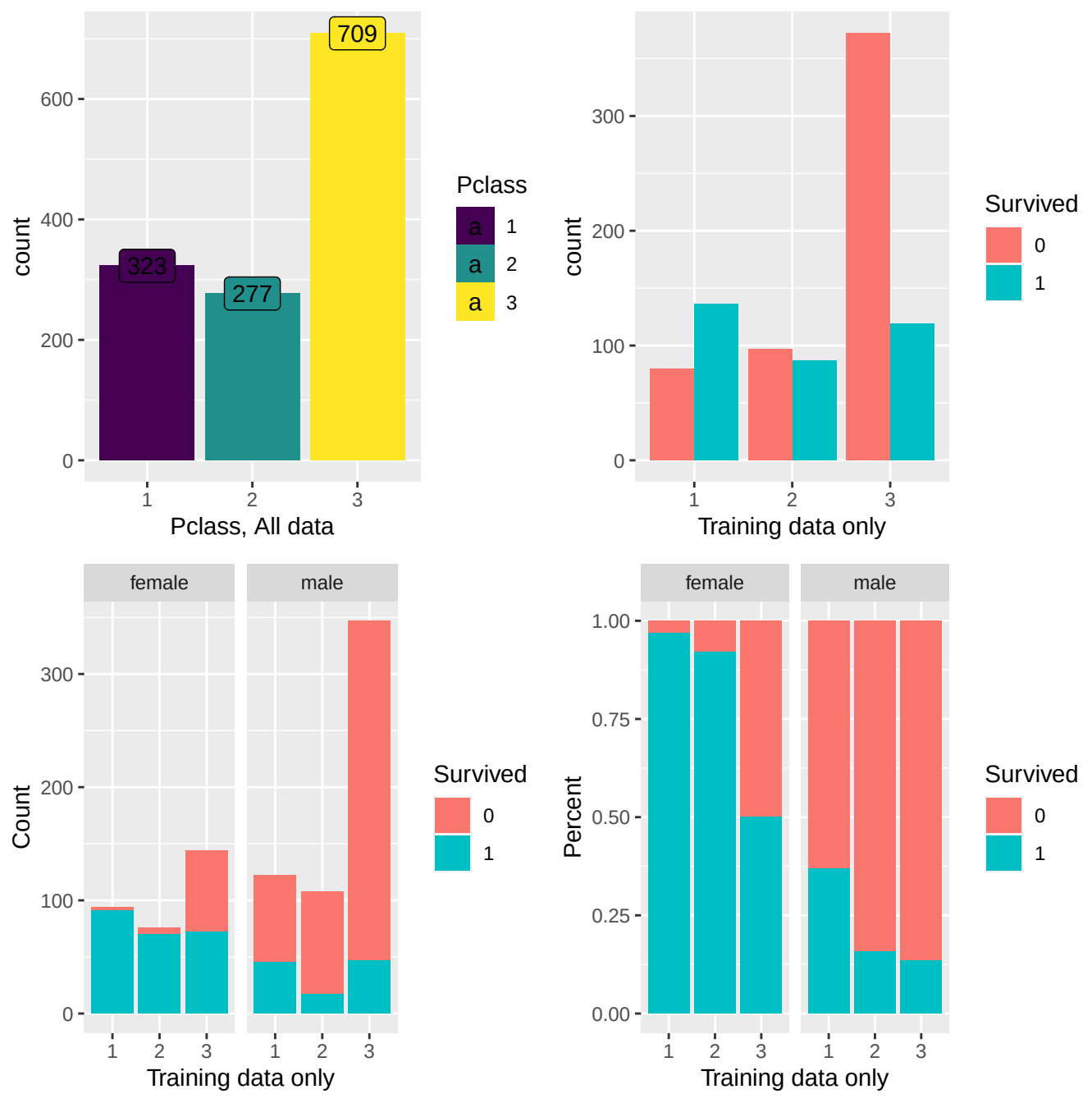
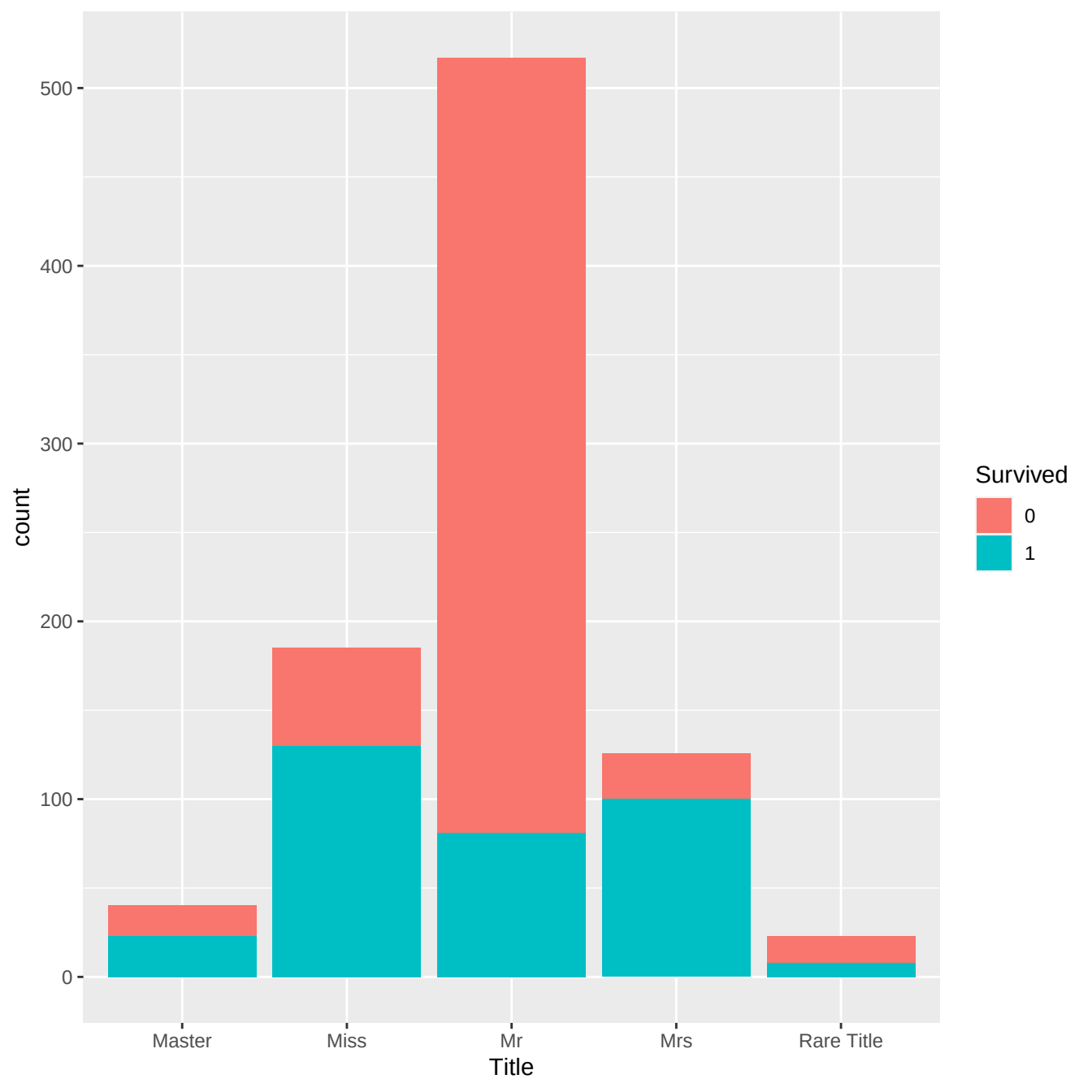
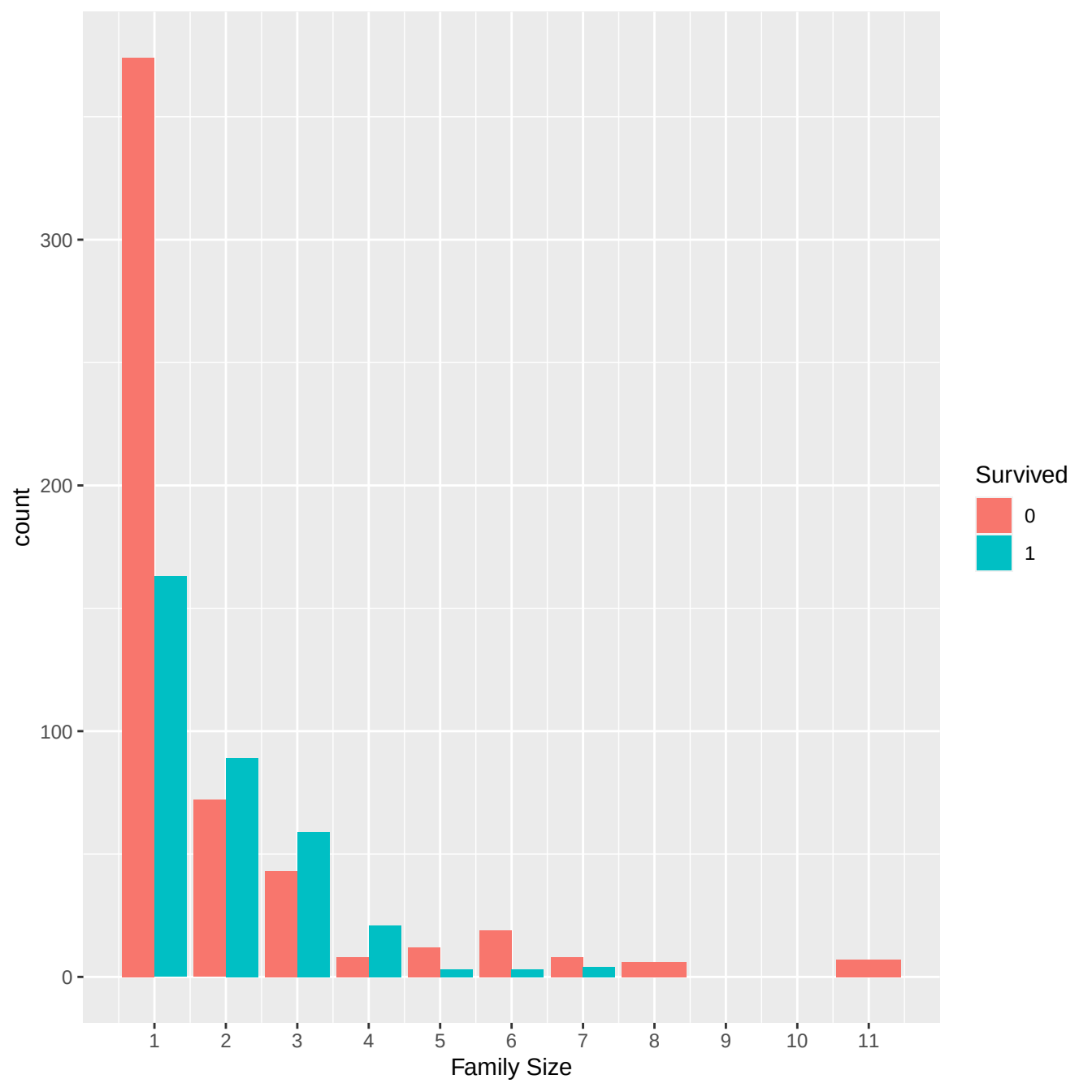


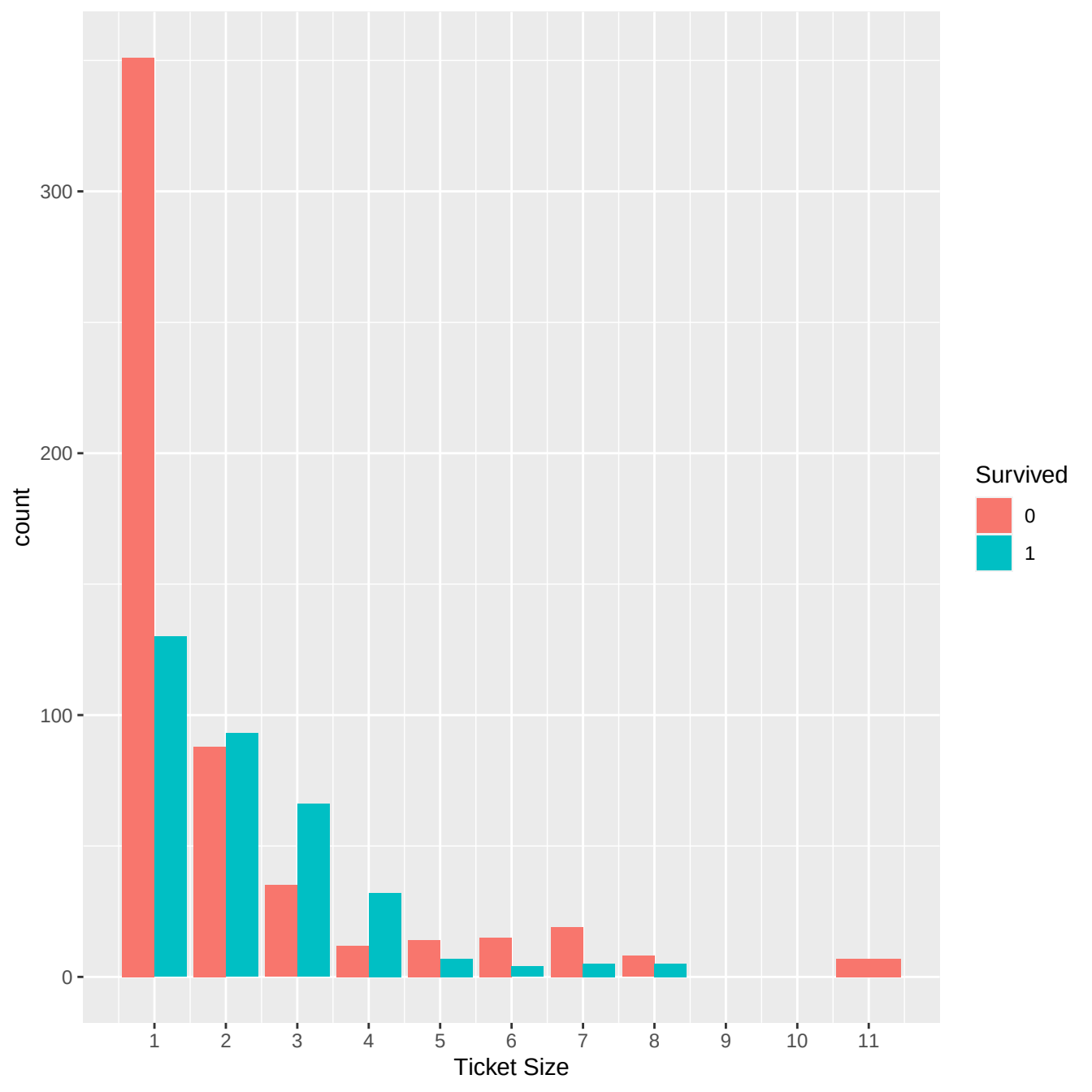
How many people died and survived on the Titanic?

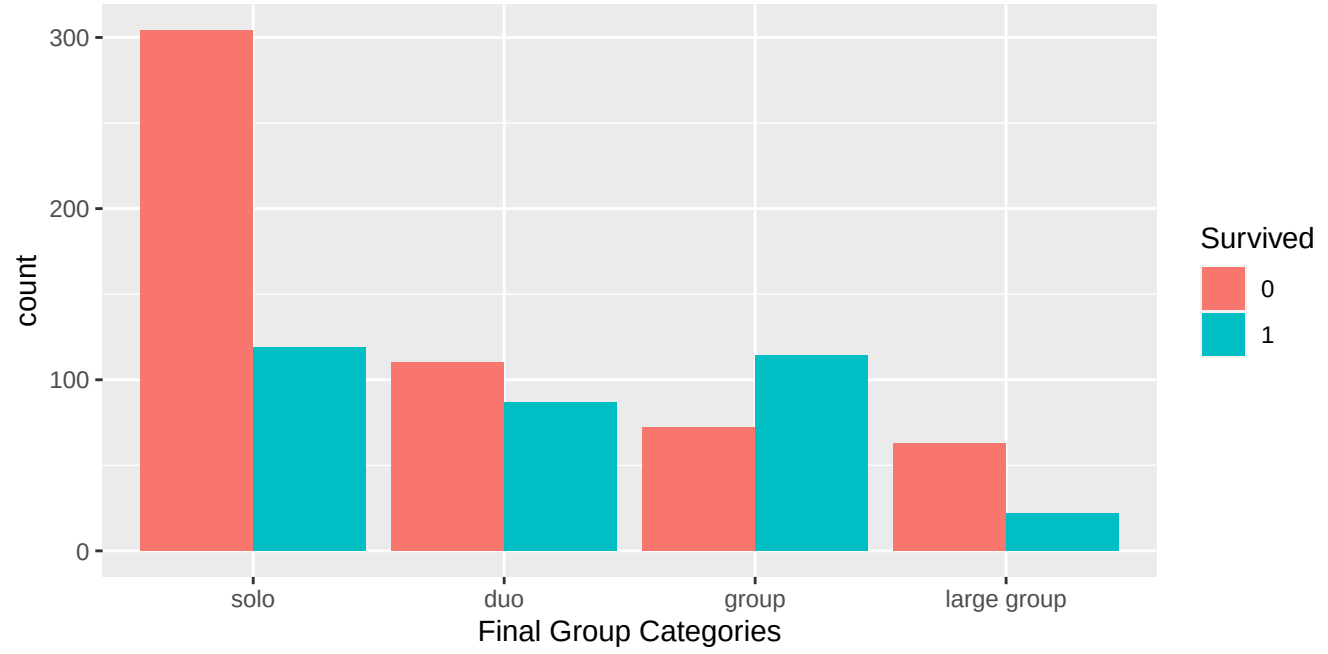

count
800
600
400
200
0
843
466
female
male
All data
legend
a female
a male
count
400
300
200
100
0
468
233
81
109
female
male
Training data only
Survived
a 0
a 1

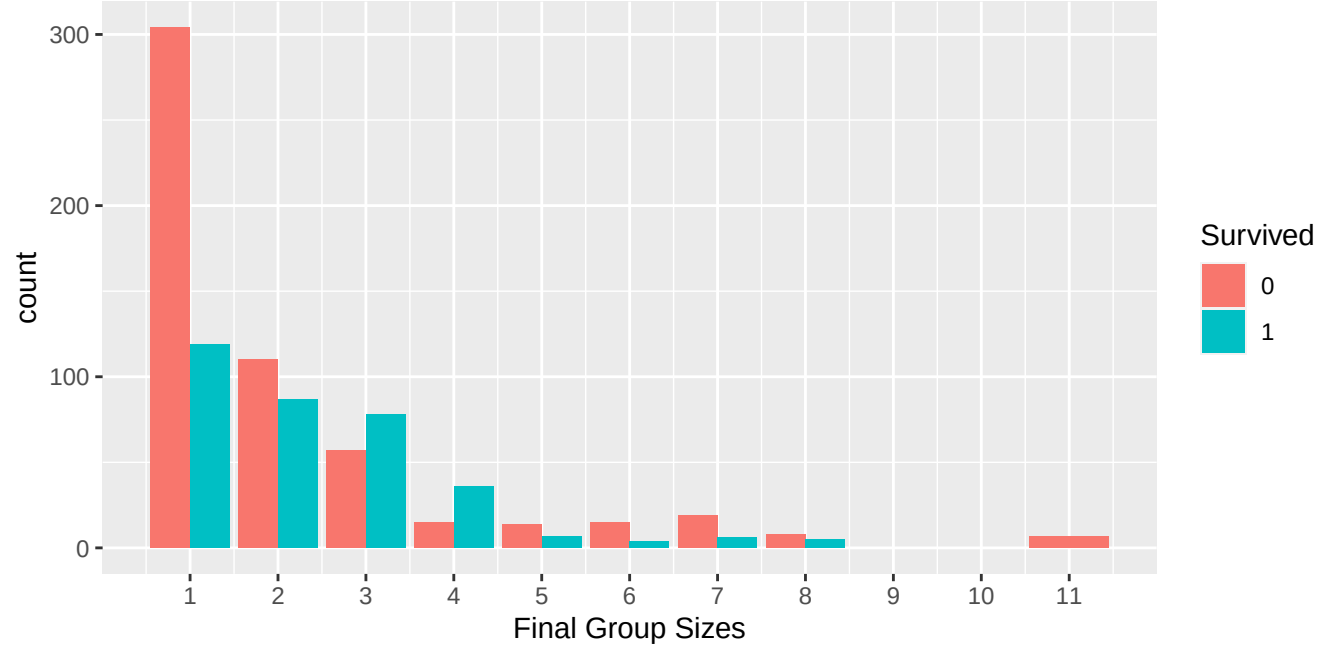

709
323
277
600
400
200
0
count
1
2
3
Pclass, All data
Pclass
a 1
a 2
a 3
300
200
100
0
count
1
2
3
Training data only
Survived
0
1
female
male
300
200
100
0
Count
1
2
3
Training data only
Survived
0
1
female
male
1.00
0.75
0.50
0.25
0.00
Percent
1
2
3
Training data only
Survived
0
1

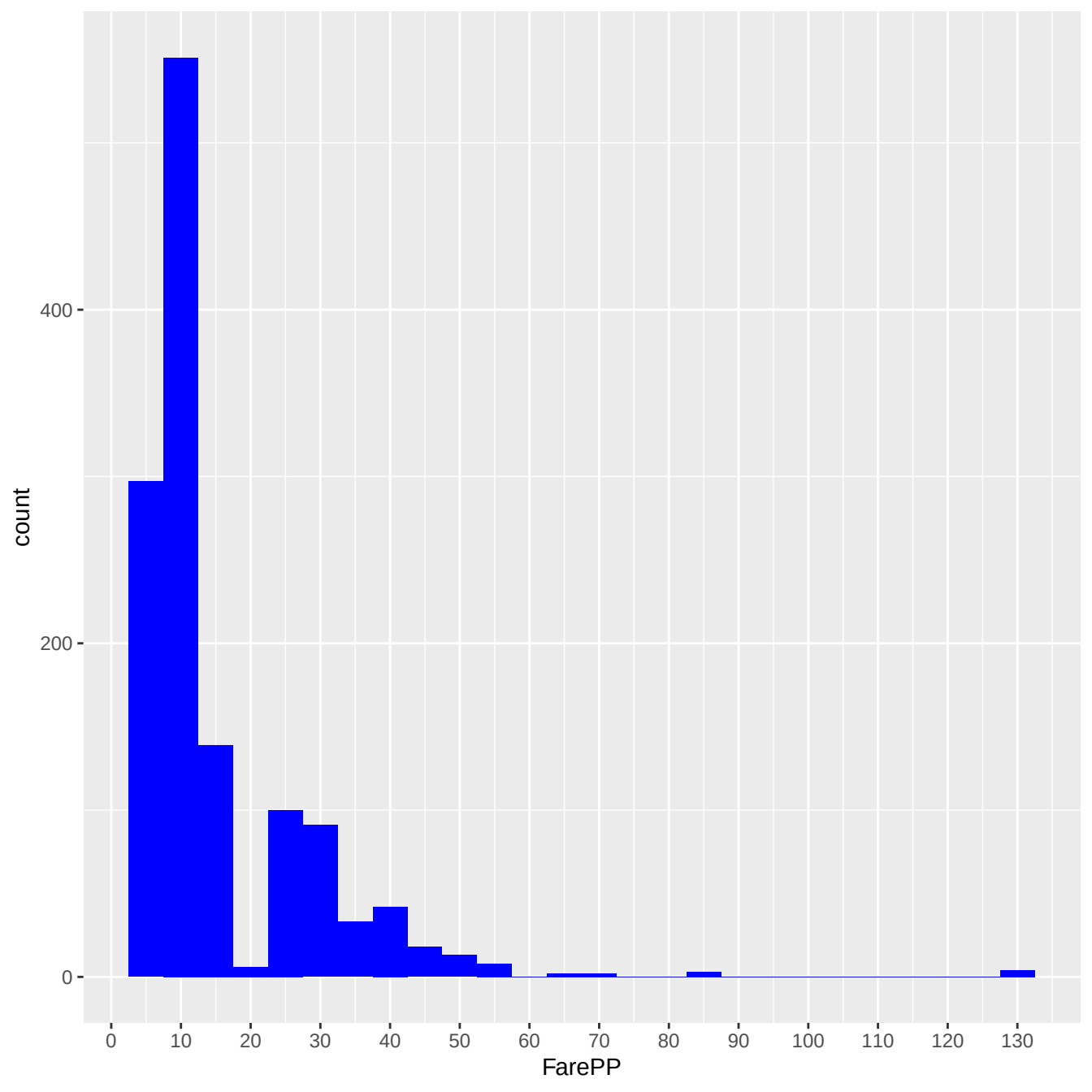

500
400
300
200
100
0
count
Master
Miss
Mr
Mrs
Rare Title
Title
Survived
0
1

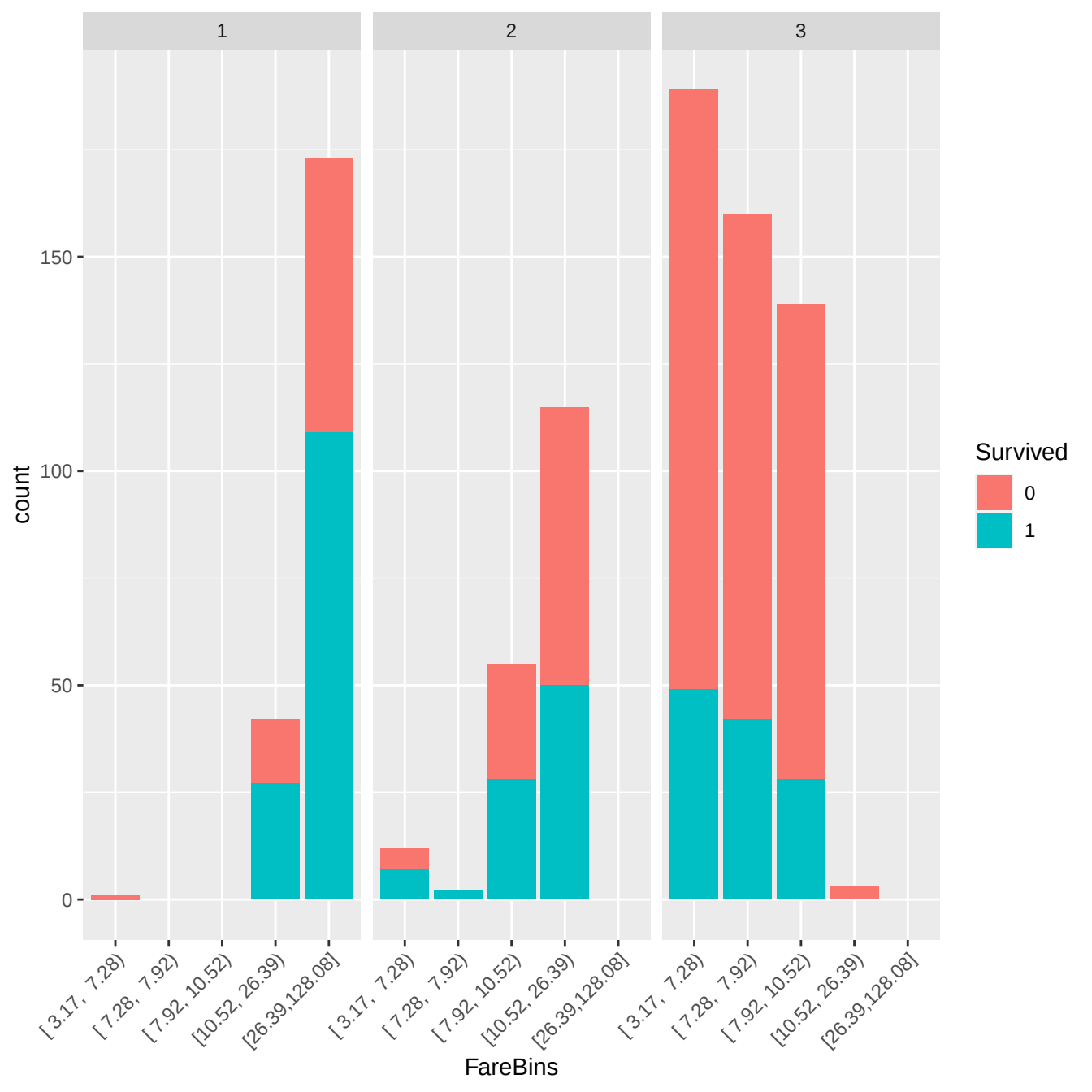

count
300
200
100
0
1
2
3
4
5
6
7
8
9
10
11
Family Size
Survived
0
1

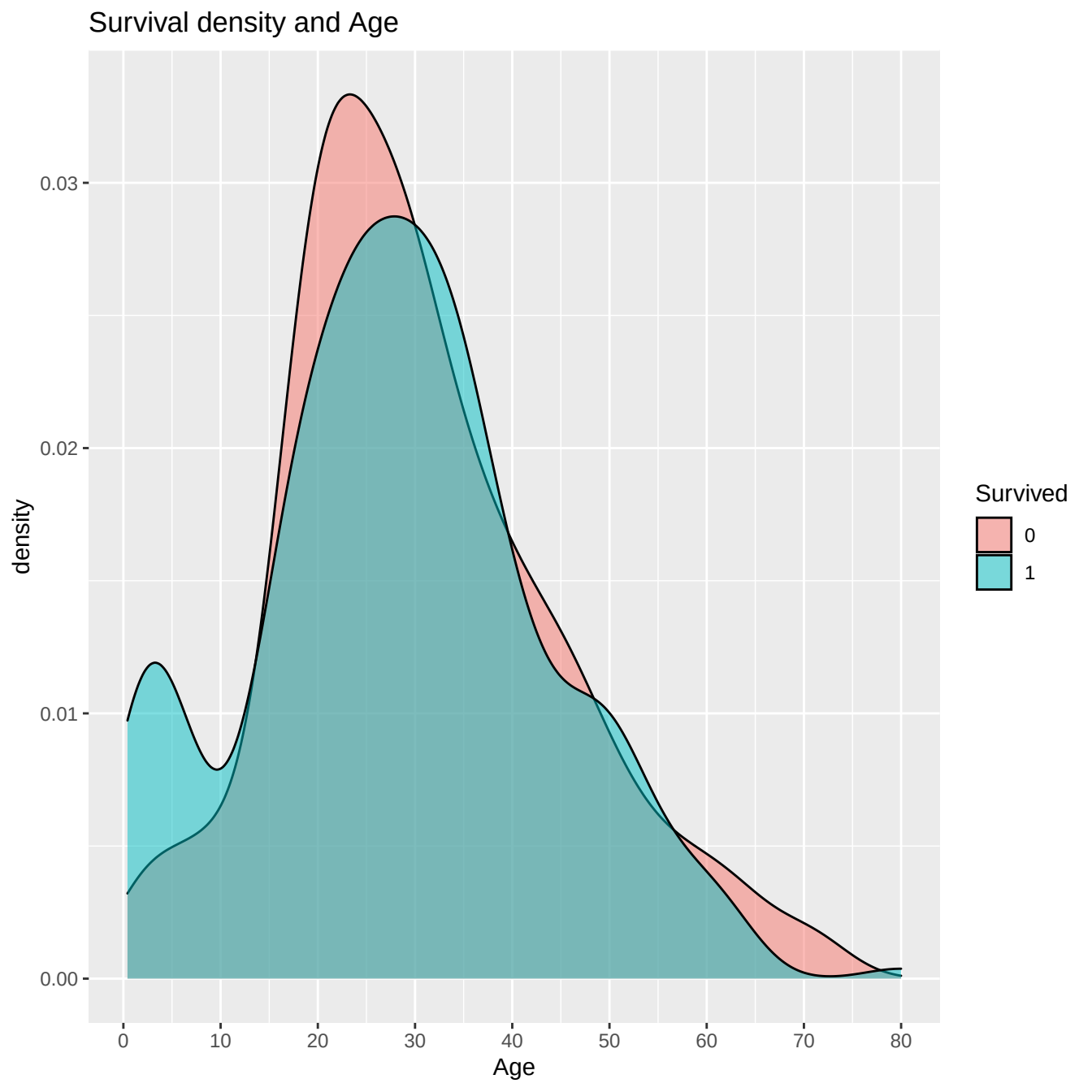

300
200
100
0
count
1
2
3
4
5
6
7
8
9
10
11
Ticket Size
Survived
0
1

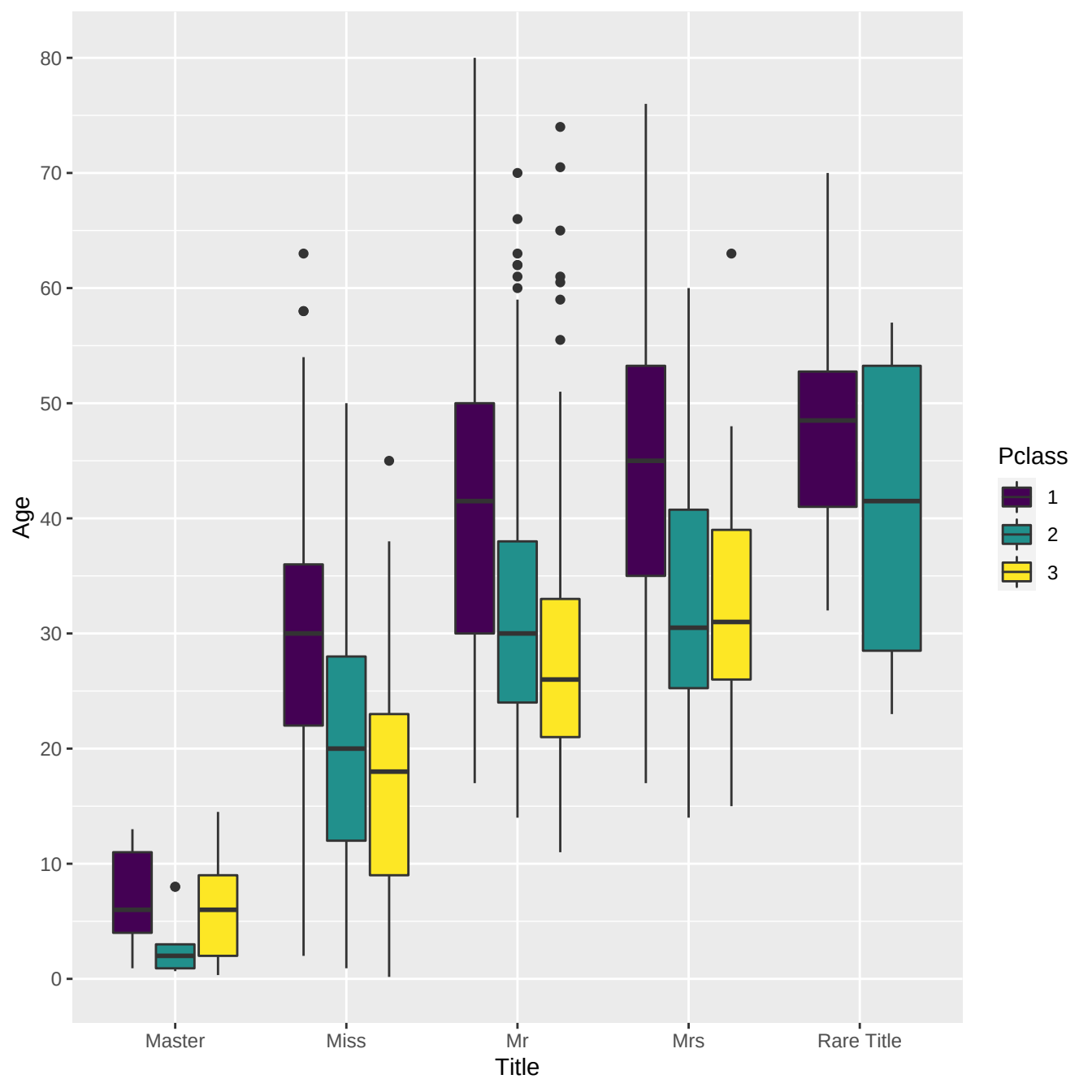

300
200
100
0
count
solo
duo
group
large group
Final Group Categories
Survived
0
1

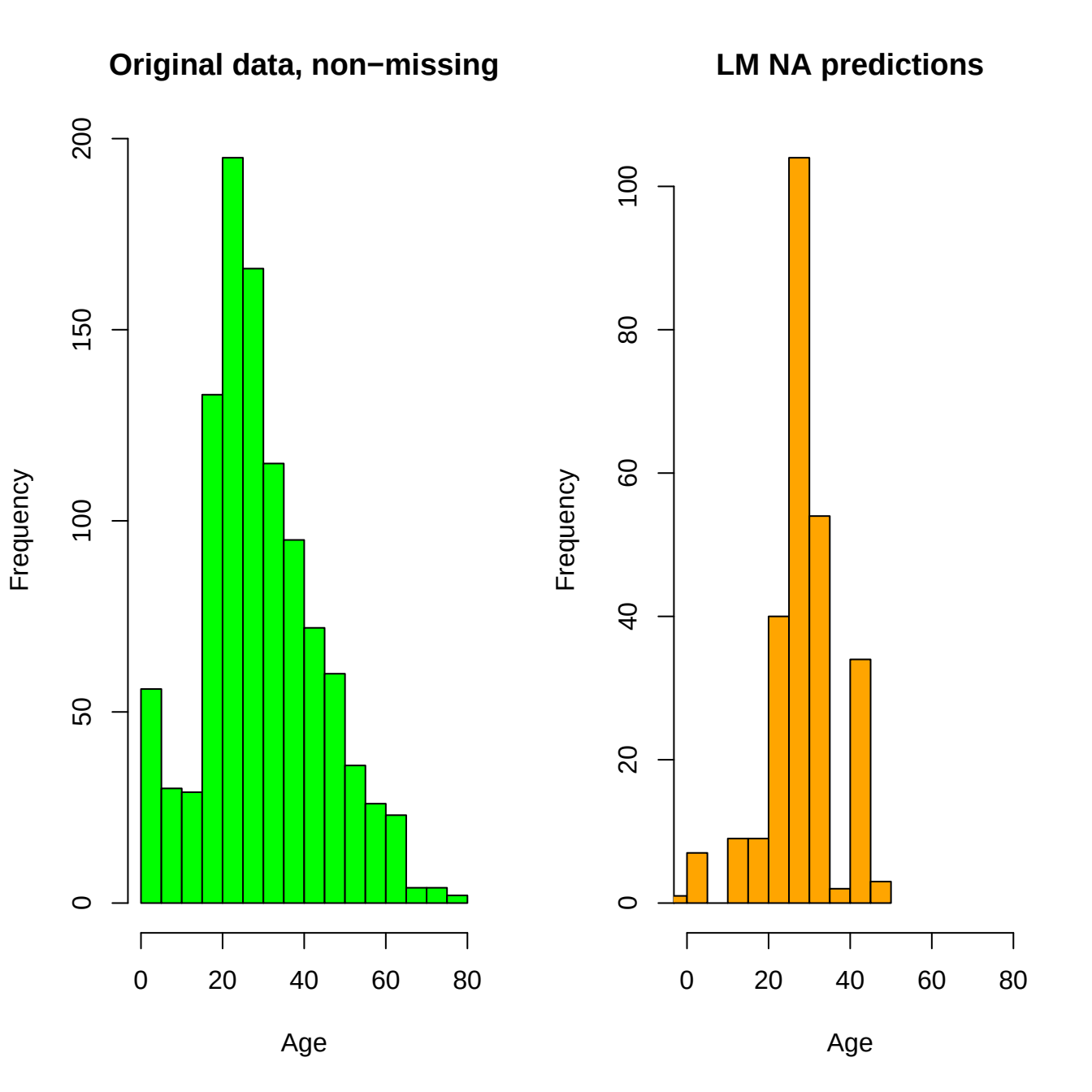

300
200
100
0
count
1
2
3
4
5
6
7
8
9
10
11
Final Group Sizes
Survived
0
1

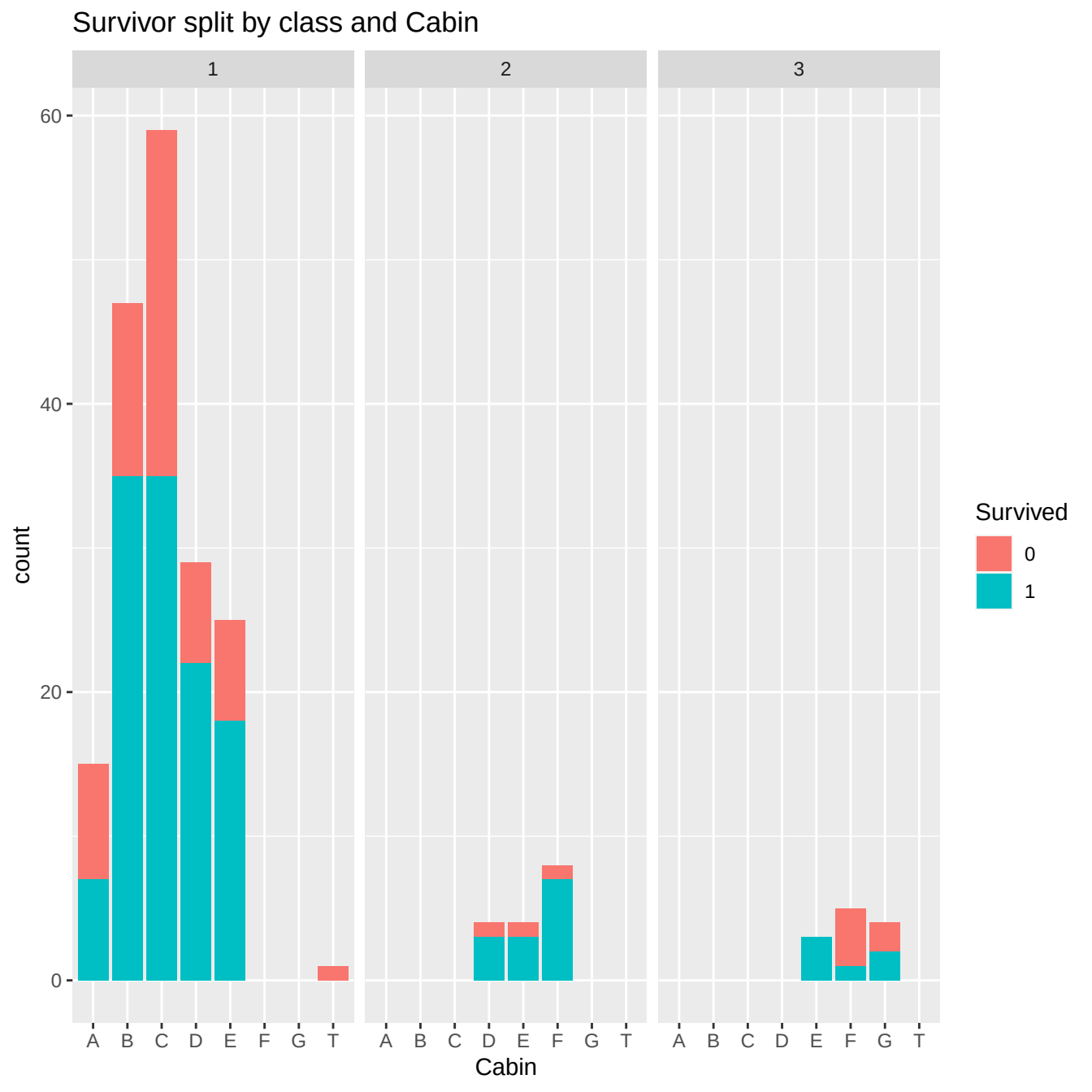

count
400
200
0
0
10
20
30
40
50
60
70
80
90
100
110
120
130
FarePP

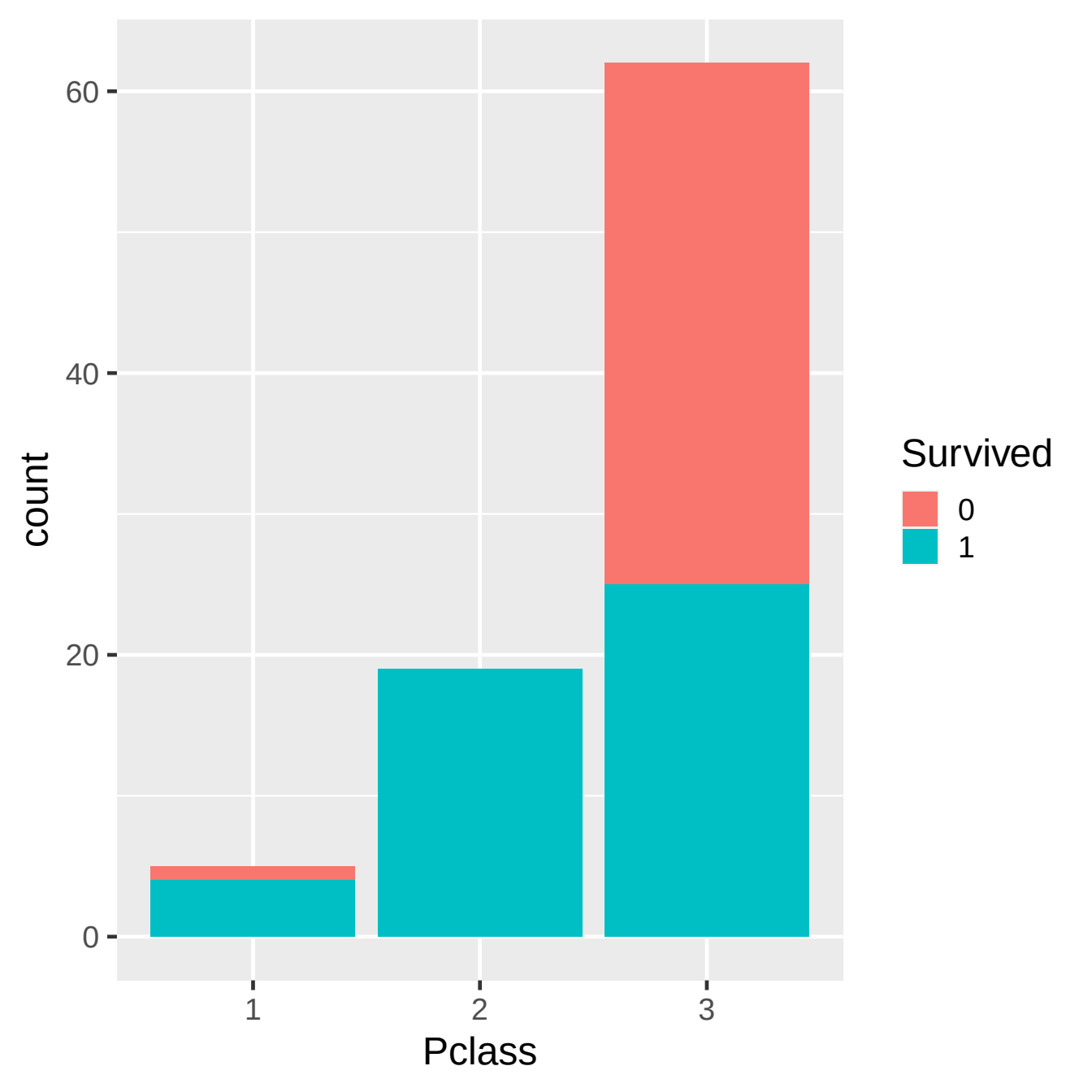

1
2
3
count
150
100
50
0
[3.17, 7.28)
[7.28, 7.92)
[7.92, 10.52)
[10.52, 26.39)
[26.39,128.08]
FareBins
Survived
0
1

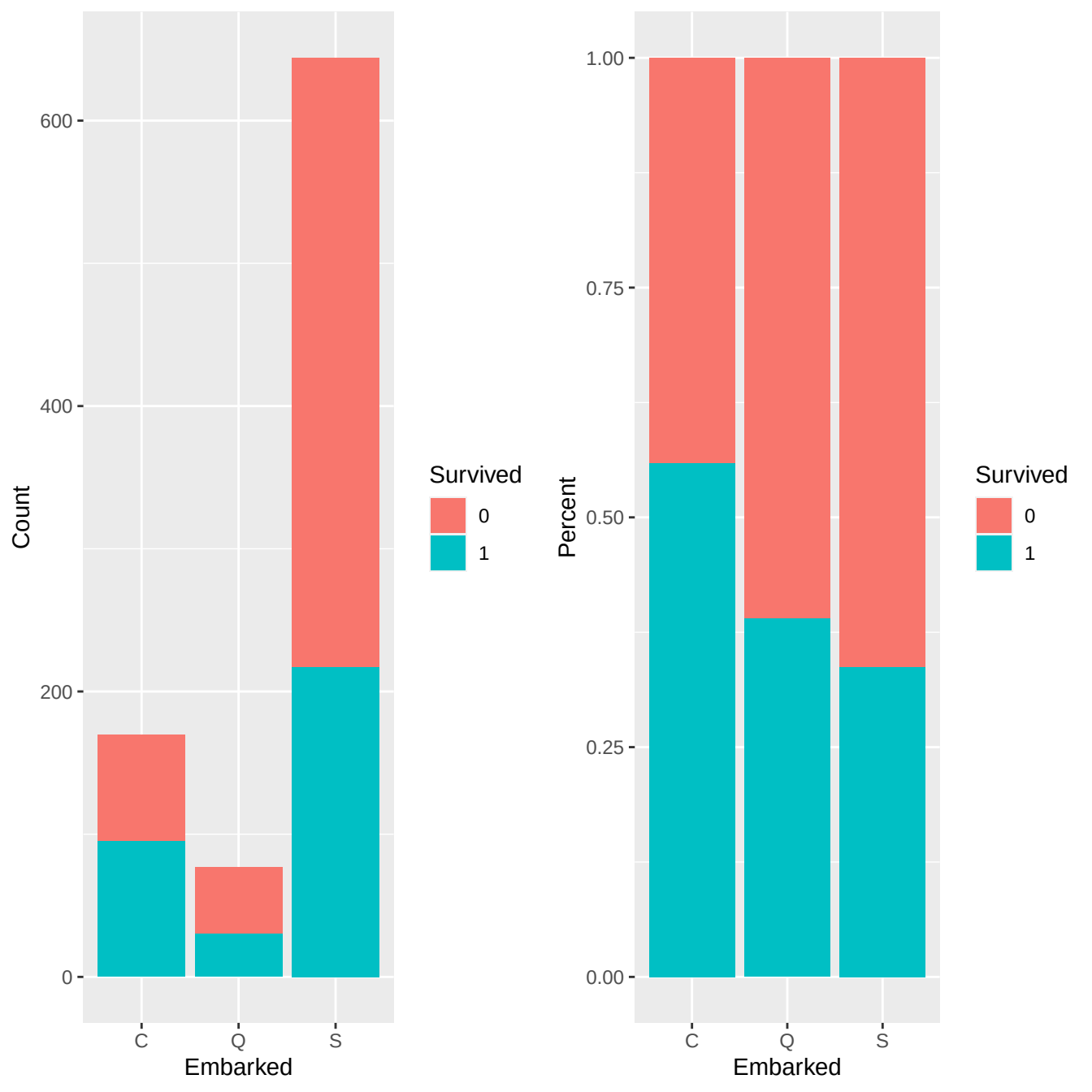

Survival density and Age
density
0.03
0.02
0.01
0.00
0
10
20
30
40
50
60
70
80
Age
Survived
0
1

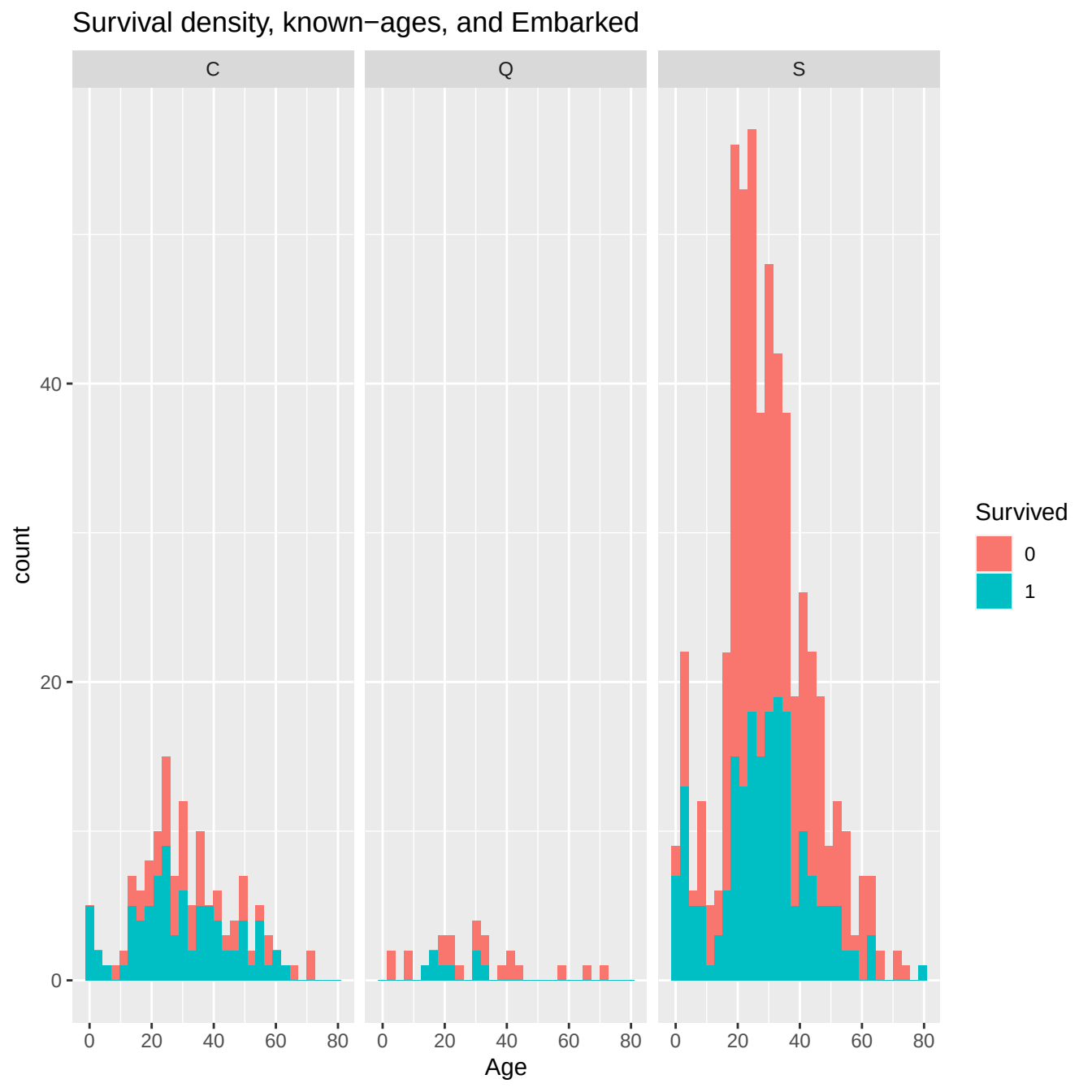

80
70
60
50
40
30
20
10
0
Age
Master
Miss
Mr
Mrs
Rare Title
Title
Pclass
1
2
3

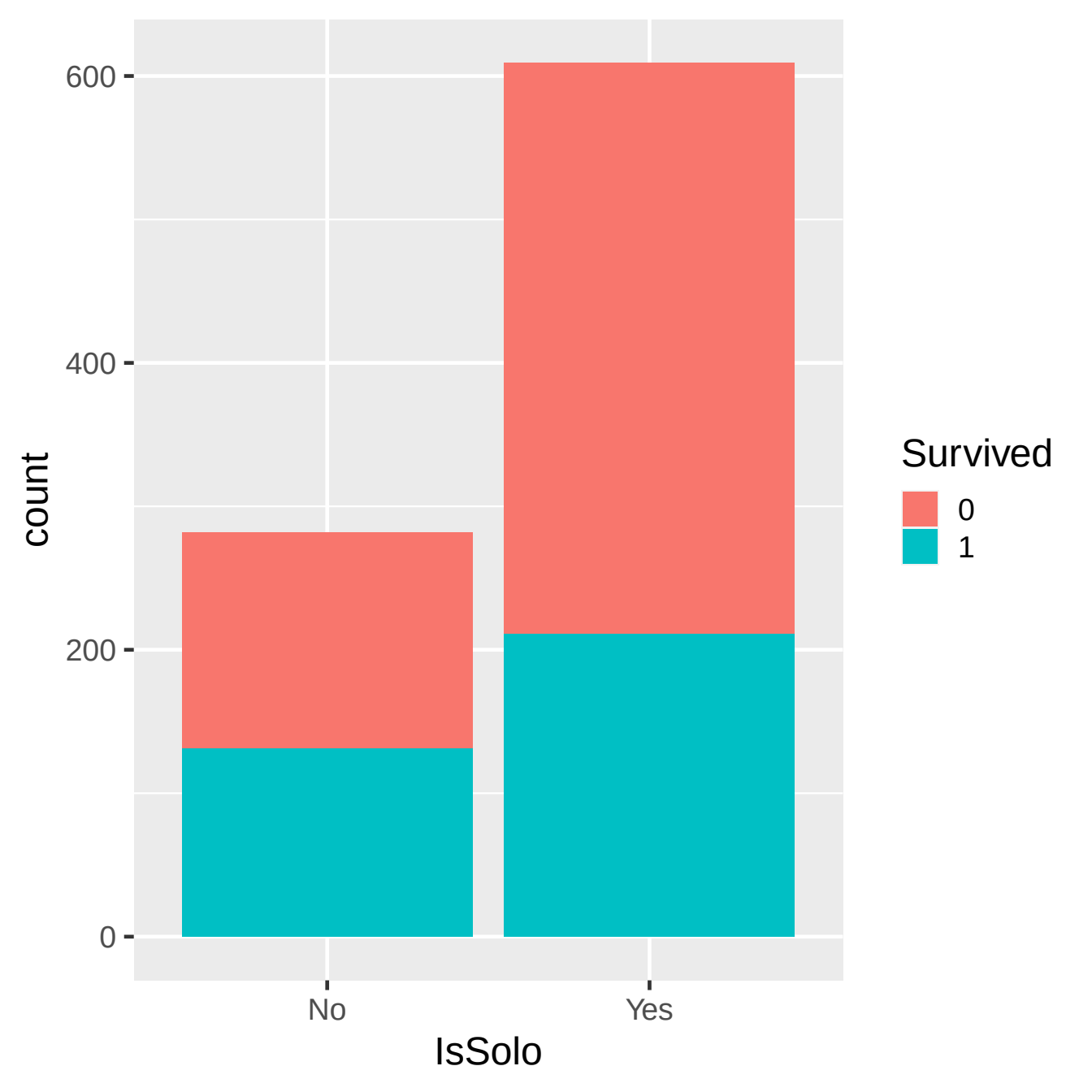

Original data, non−missing
Frequency
0
50
100
150
200
0
20
40
60
80
Age
LM NA predictions
Frequency
0
20
40
60
80
100
0
20
40
60
80
Age

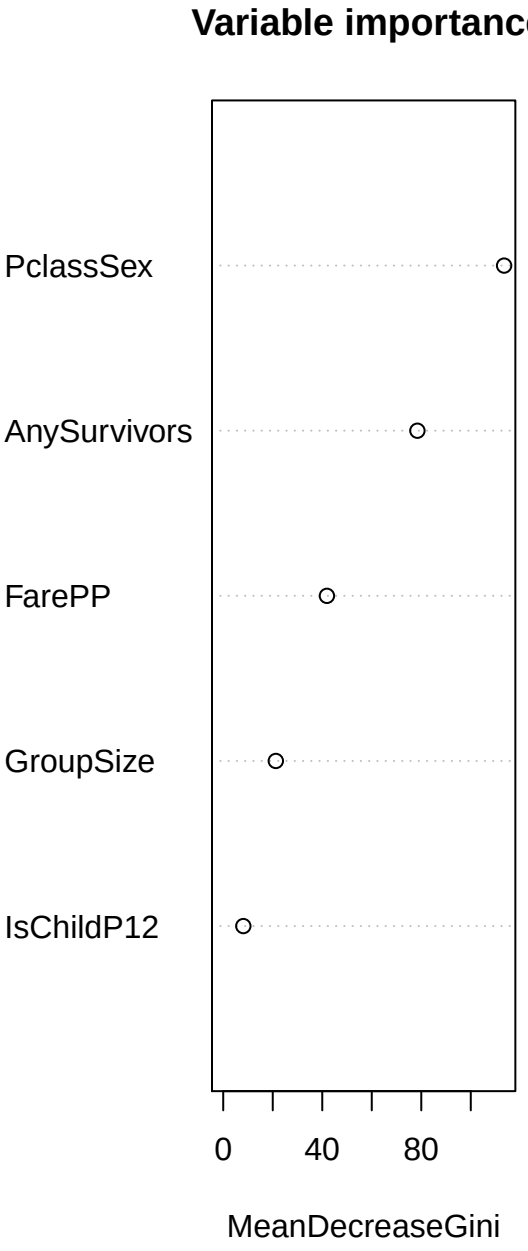

Survivor split by class and Cabin
1
2
3
60
40
20
0
count
A
B
C
D
E
F
G
T
Cabin
Survived
0
1

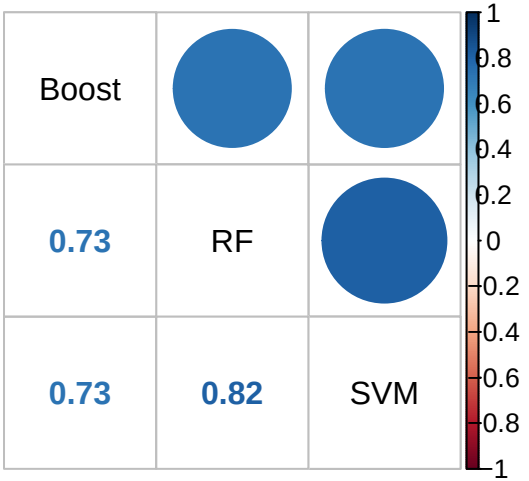

60
40
20
0
count
1
2
3
Pclass
Survived
0
1

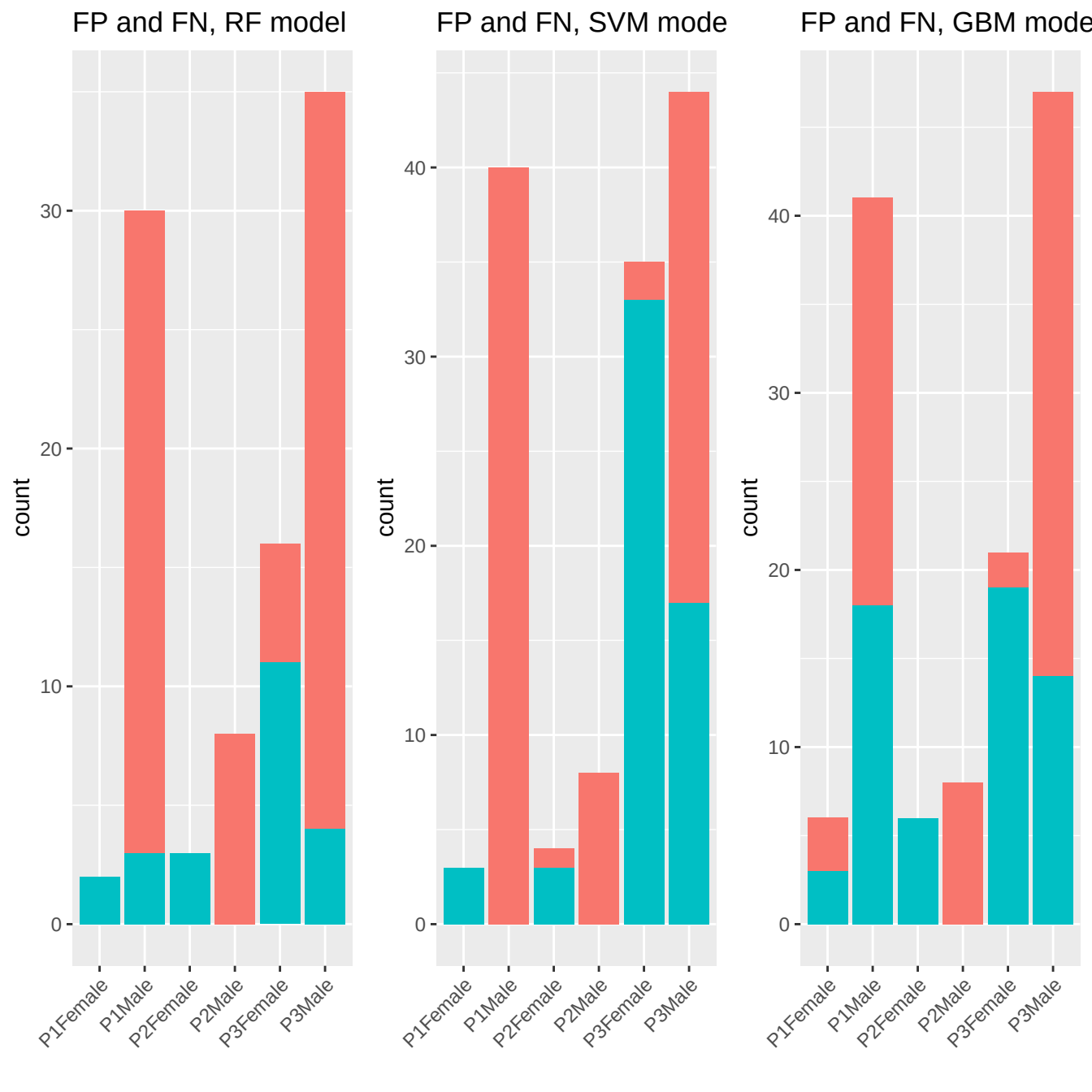

600
400
200
0
Count
C
Q
S
Embarked
Survived
0
1
1.00
0.75
0.50
0.25
0.00
Percent
C
Q
S
Embarked
Survived
0
1

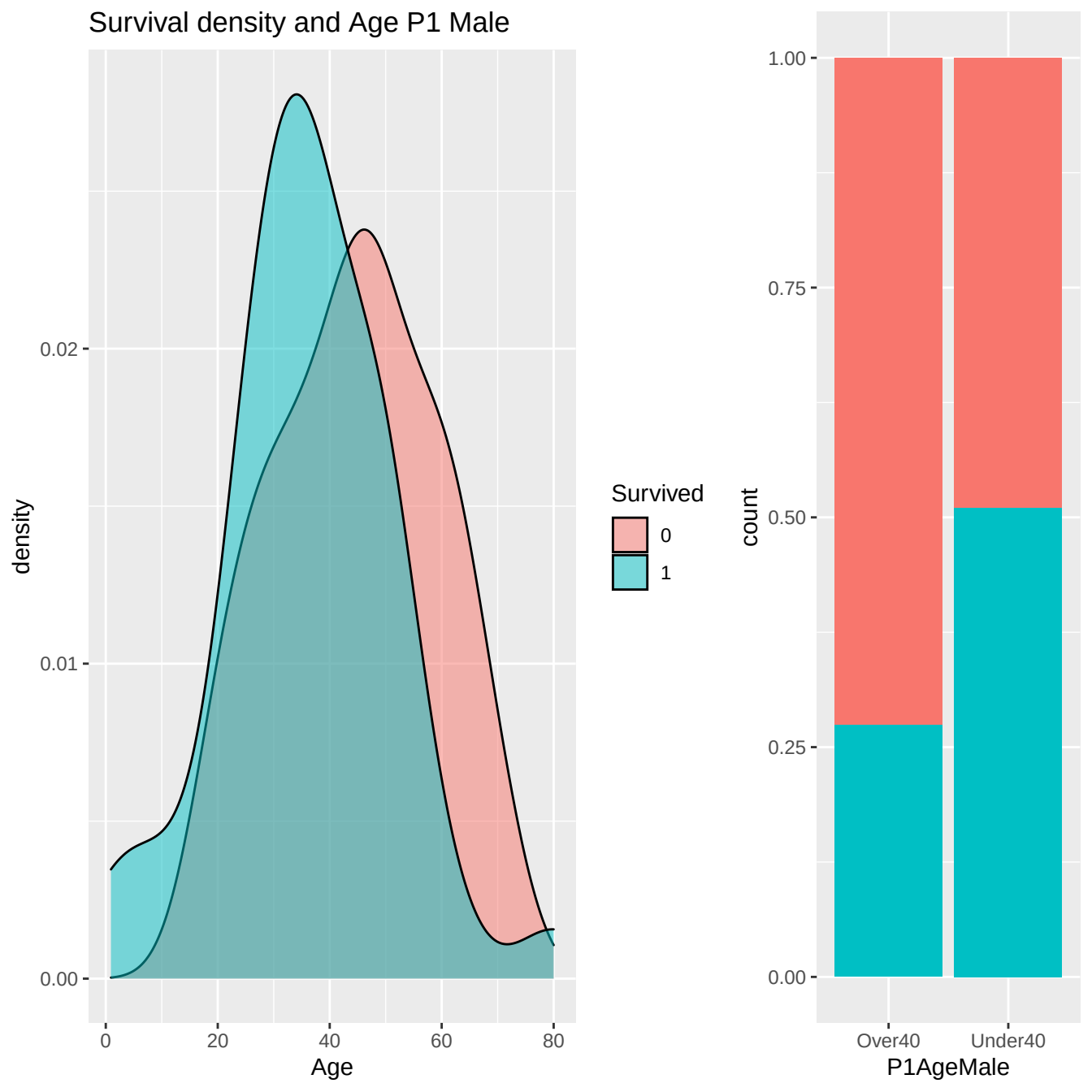

Survival density, known−ages, and Embarked
C
Q
S
count
40
20
0
0
20
40
60
80
Age
Survived
0
1

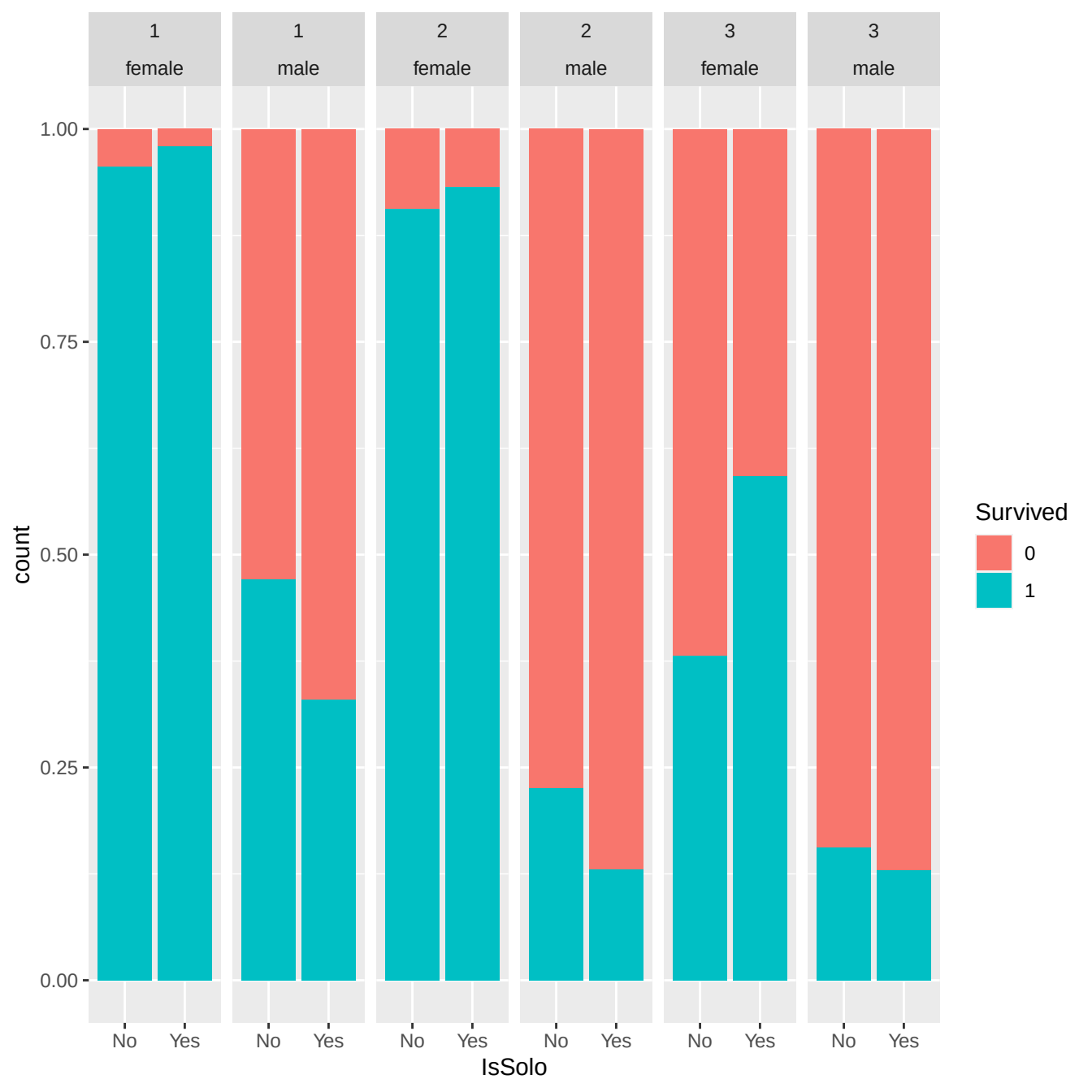

600
400
200
0
count
No
Yes
IsSolo
Survived
0
1


Variable importance
PclassSex
AnySurvivors
FarePP
GroupSize
IsChildP12
0
40
80
MeanDecreaseGini


Boost
0.73
RF
0.73
0.82
SVM
1
0.8
0.6
0.4
0.2
0
0.2
0.4
0.6
0.8
1


FP and FN, RF model
FP and FN, SVM mode
FP and FN, GBM mode
count
0
10
20
30
40
P1Female
P1Male
P2Female
P2Male
P3Female
P3Male


Survival density and Age P1 Male
density
0.02
0.01
0.00
0
20
40
60
80
Age
Survived
0
1
count
1.00
0.75
0.50
0.25
0.00
Over40
Under40
P1AgeMale


1
female
1
male
2
female
2
male
3
female
3
male
1.00
0.75
0.50
0.25
0.00
count
No
Yes
IsSolo
Survived
0
1