Variable Pricing
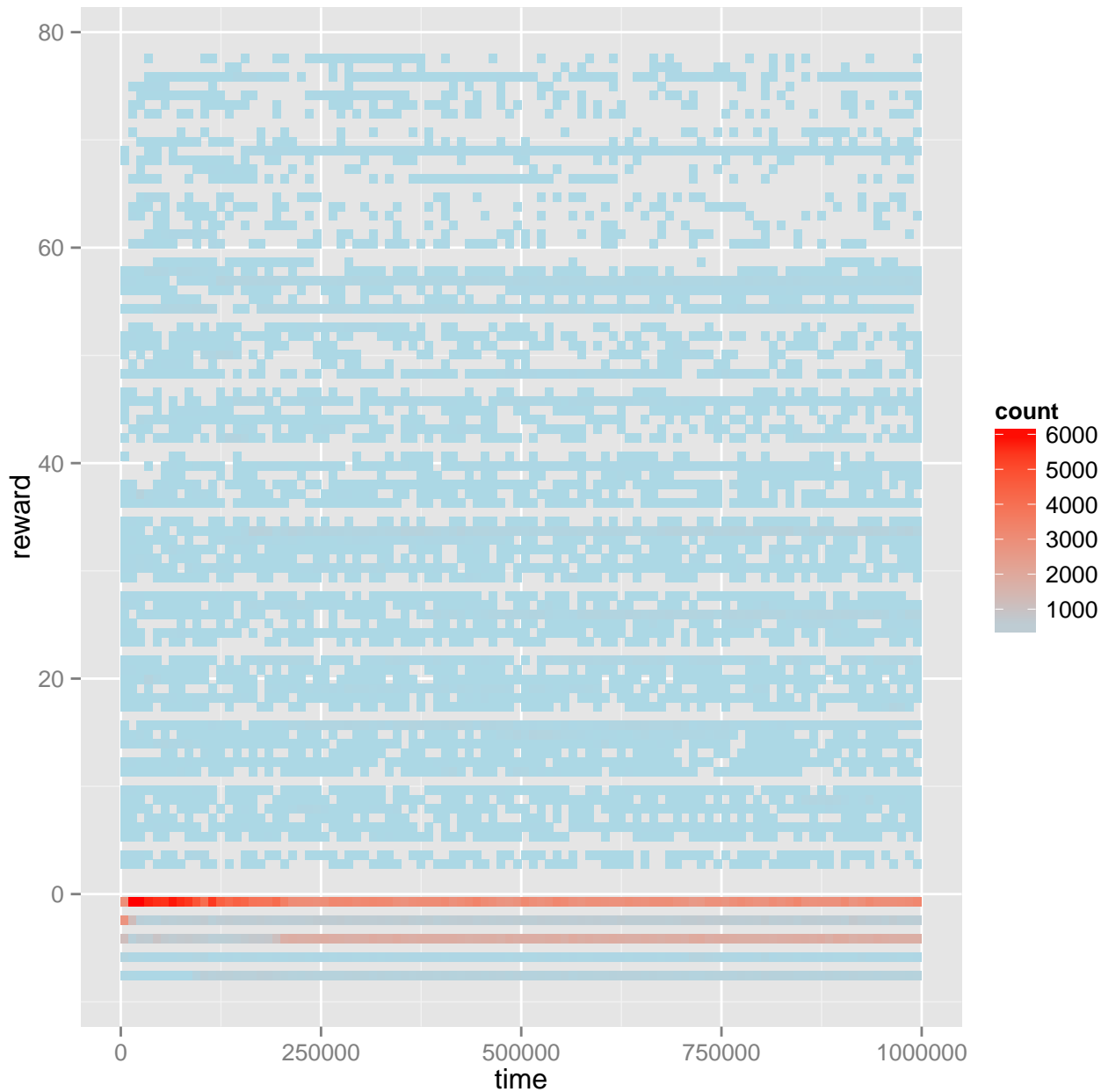
```
      time              action            reward            busy_for
 Min.   :     1    wait :  4828    Min.   :-8.0      Min.    :1.0
 1st Qu.:250001    drive:262046    1st Qu.:-4.0      1st Qu.:1.0
 Median :500000    offer:388565    Median :-1.0      Median :1.0
 Mean   :500000    NA's :344560    Mean   : 2.5      Mean    :1.5
 3rd Qu.:750000                    3rd Qu.:-1.0      3rd Qu.:2.0
 Max.   :999999                    Max.   :78.0      Max.    :4.0
                                   NA's   :344560    NA's    :344560
 location          destination        passenger            fare
 3   : 63852    3   : 48419    declined:164557    Min.   :  5
 1   : 45736    1   : 48888    accepted: 81745    1st Qu.: 40
 2   :171926    5   : 49092    NA's    :753697    Median : 60
 4   :237286    4   : 22702                       Mean   : 91
 6   : 98452    2   : 35941                       3rd Qu.:104
 5   : 38187    6   : 41260                       Max.   :400
 NA's:344560    NA's:753697                       NA's   :753697
```

Observed rewards over time

```
Analysis of Variance Table

Response: reward
             Df     Sum Sq Mean Sq F value     Pr(>F)
time          1      10617 10616.7  54.523 1.538e-13 ***
Residuals 655437 127625345   194.7
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' '
```
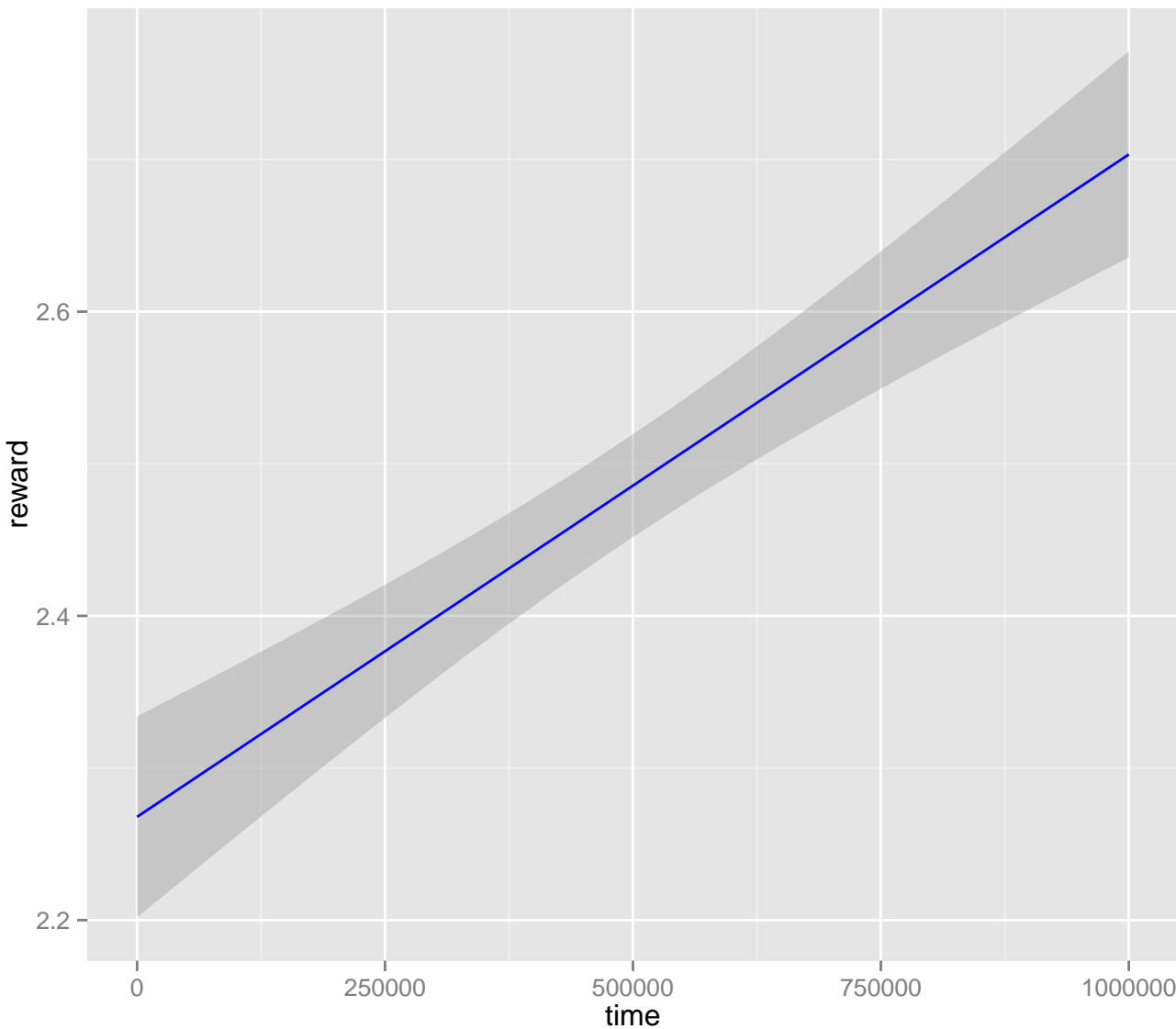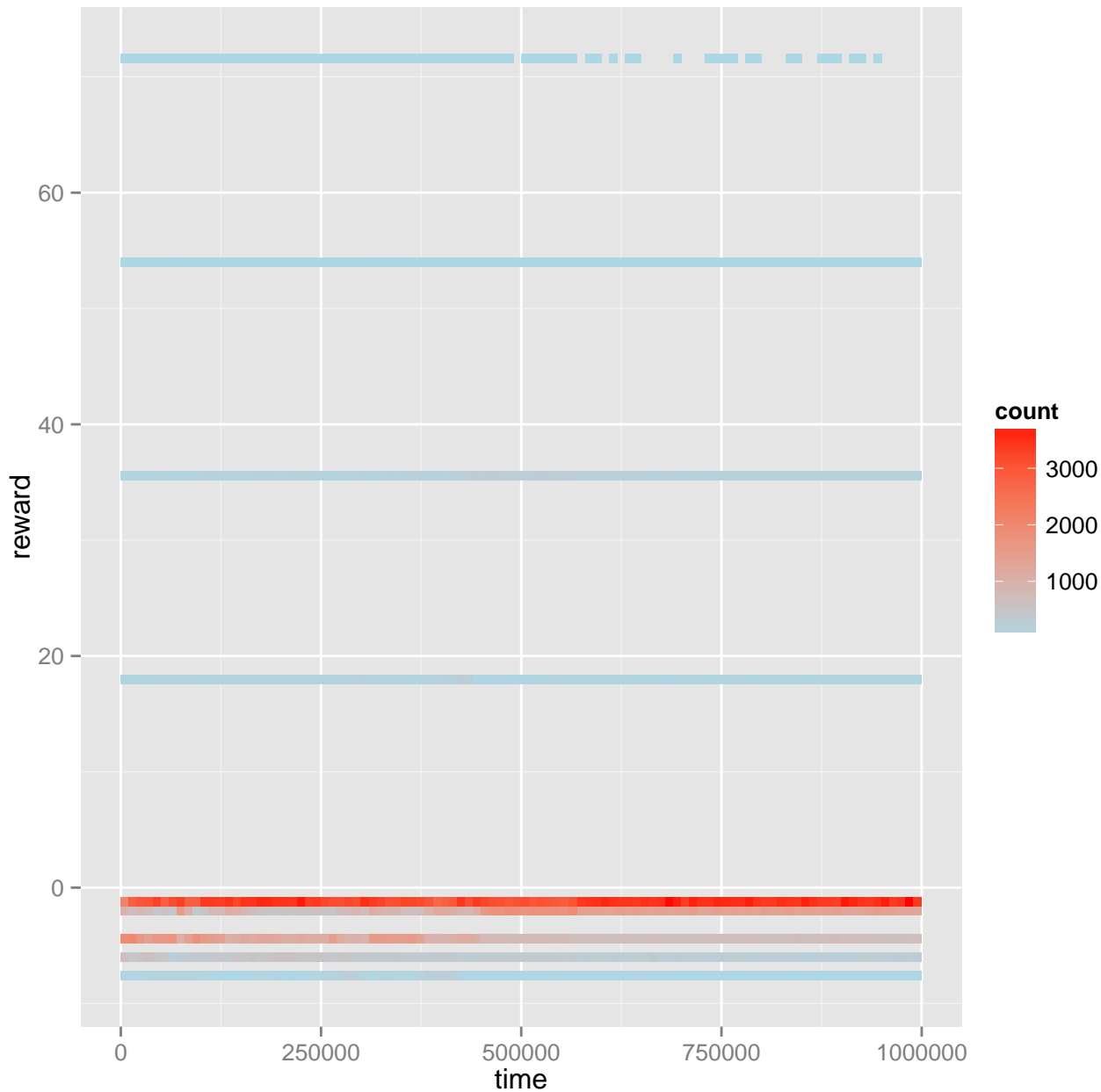
Regression analysis of observed rewards over time

Benchmark

```
      time                action              reward              busy_for
 Min.   :      1    drive:449574    Min.   :-8.0      Min.   :1.0
 1st Qu.: 250001    wait :106834    1st Qu.:-2.0      1st Qu.:1.0
 Median : 500001    offer: 62565    Median :-1.0      Median :1.0
 Mean   : 500001    NA's :381027    Mean   :-0.5      Mean   :1.6
 3rd Qu.: 750000                    3rd Qu.:-1.0      3rd Qu.:2.0
 Max.   :1000000                    Max.   :72.0      Max.   :4.0
                                    NA's   :381027    NA's   :381027
 location         destination        passenger              fare
 1   : 98793    3   :   7308    accepted: 28963    Min.   :20.0
 2   : 98733    4   :   2918    declined:  8291    1st Qu.:20.0
 3   : 78596    1   :   7449    NA's    :962746    Median :40.0
 4   :202280    2   :   5873                       Mean   :38.8
 5   : 74350    6   :   6265                       3rd Qu.:40.0
 6   : 66221    5   :   7441                       Max.   :80.0
 NA's:381027    NA's:962746                        NA's   :962746
```

Observed rewards over time

```
Analysis of Variance Table

Response: reward
            Df    Sum Sq Mean Sq F value     Pr(>F)
time          1     35677   35677  640.41 < 2.2e-16 ***
Residuals 618971 34482482      56
---
Signif. codes:  0 `***' 0.001 `**' 0.01 `*' 0.05 `.' 0.1 ` '
```

Regression analysis of observed rewards over time

Linear Regression (95% confidence)