Variable Pricing
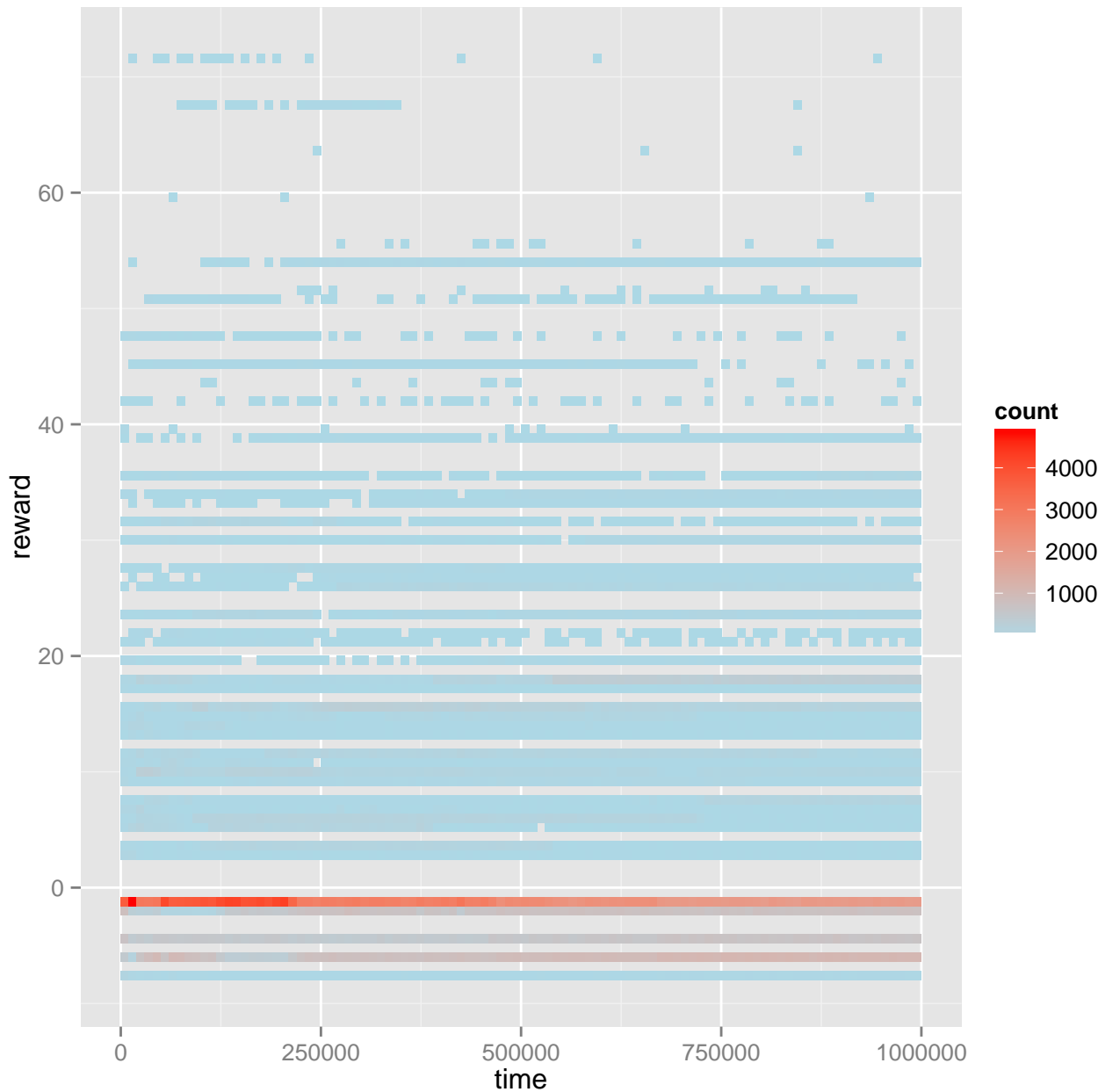
```
       time                 action                reward               busy_for
 Min.   :      1     wait : 93308     Min.   :-8.0        Min.   :1.0
 1st Qu.:250001     drive:256904     1st Qu.:-2.0        1st Qu.:1.0
 Median :500000     offer:279738     Median :-1.0        Median :1.0
 Mean   :500000     NA's :370049     Mean   : 1.7        Mean   :1.6
 3rd Qu.:750000                      3rd Qu.:-1.0        3rd Qu.:2.0
 Max.   :999999                      Max.   :72.0        Max.   :4.0
                                     NA's   :370049      NA's   :370049
 location          destination        passenger             fare
 6   : 84844     6   : 31107     accepted:140952     Min.   : 5.0
 1   :128703     5   : 24478     declined: 23300     1st Qu.:12.0
 2   : 67831     3   : 21838     NA's    :835747     Median :20.0
 3   :188960     1   : 29283                         Mean   :22.9
 4   : 96092     2   : 31717                         3rd Qu.:30.0
 5   : 63520     4   : 25829                         Max.   :80.0
 NA's:370049     NA's:835747                         NA's   :835747
```

Observed rewards over time

```
Analysis of Variance Table

Response: reward
             Df    Sum Sq Mean Sq F value    Pr(>F)
time          1     57020   57020  668.46 < 2.2e-16 ***
Residuals 629948 53734906      85
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' '
```
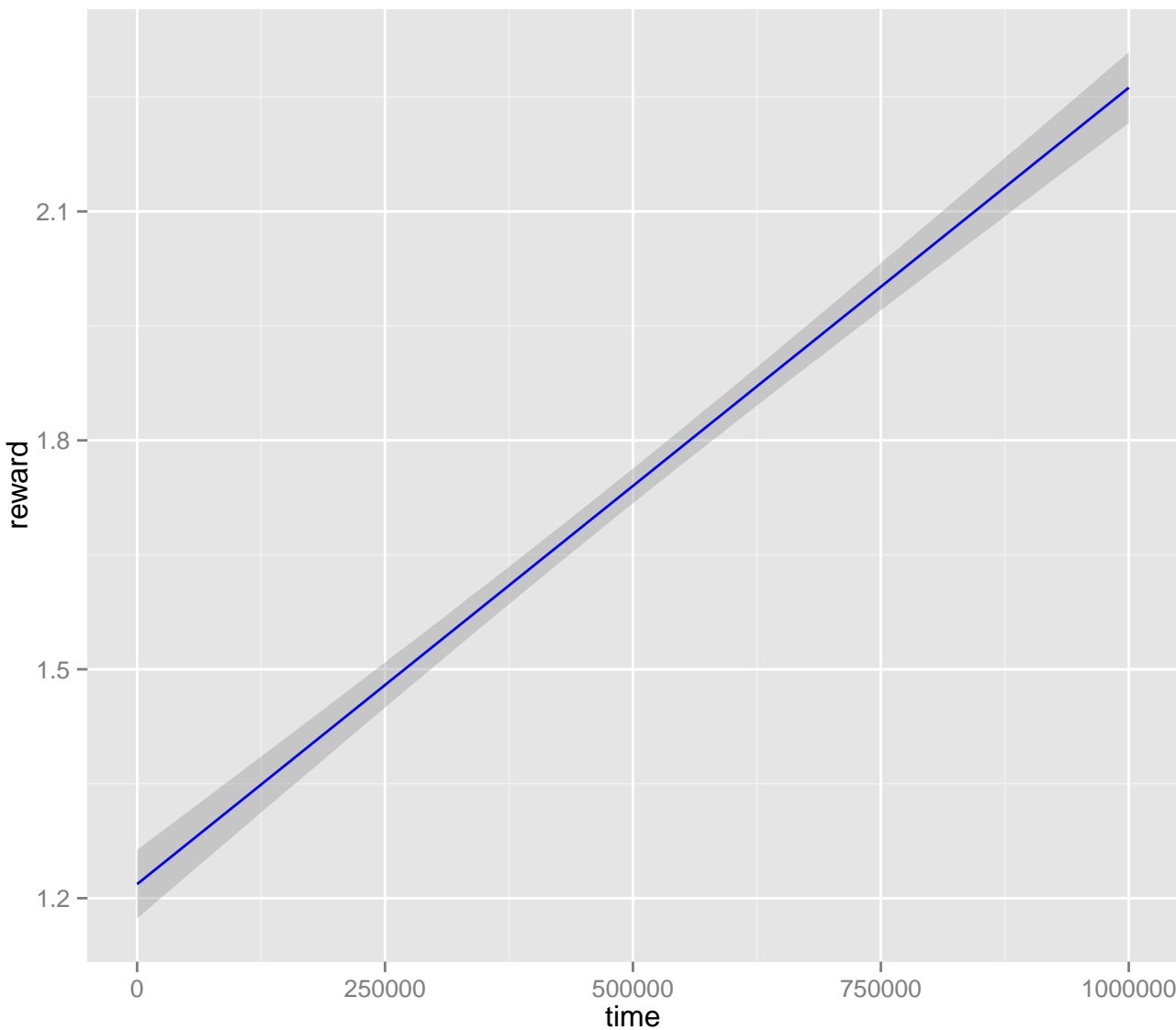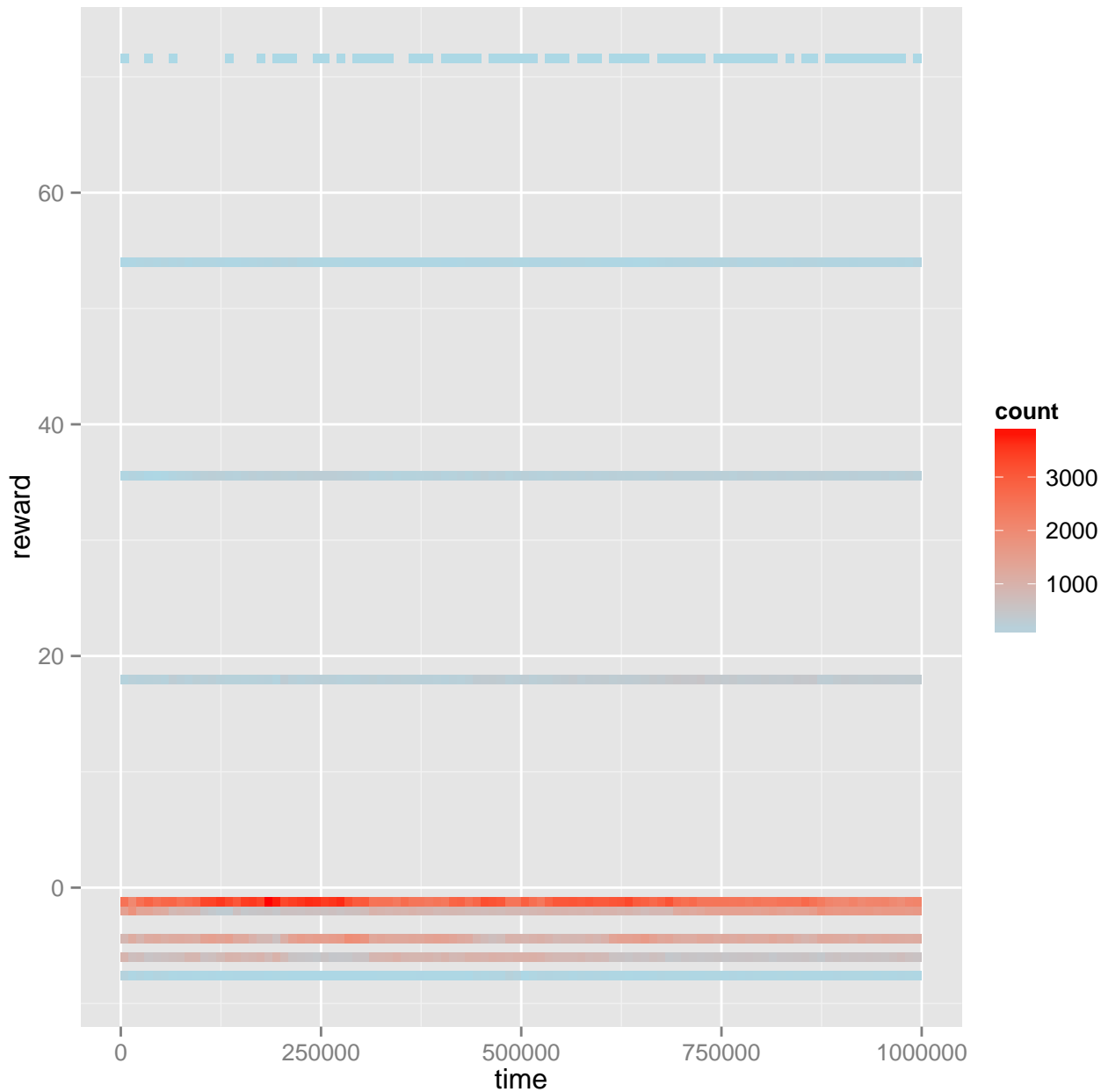
Regression analysis of observed rewards over time

Benchmark

```
      time                action            reward             busy_for
 Min.   :      1    wait :158216    Min.   :-8.0     Min.    :1.0
 1st Qu.: 250001    drive:358652    1st Qu.:-4.0     1st Qu.:1.0
 Median : 500001    offer:122645    Median :-1.0     Median :1.0
 Mean   : 500001    NA's :360487    Mean   : 0.4     Mean    :1.6
 3rd Qu.: 750000                    3rd Qu.:-1.0     3rd Qu.:2.0
 Max.   :1000000                    Max.   :72.0     Max.    :4.0
                                    NA's   :360487   NA's    :360487
 location        destination       passenger            fare
 2  : 96717   5   :  8362    accepted: 59513    Min.    :20.0
 1  : 85727   3   : 13646    declined: 22337    1st Qu.:20.0
 3  :134430   6   : 15815    NA's    :918150    Median :40.0
 4  :104414   1   : 15356                       Mean    :37.9
 5  :140734   4   : 12884                       3rd Qu.:60.0
 6  : 77491   2   : 15787                       Max.    :80.0
 NA's:360487   NA's:918150                      NA's    :918150
```

Observed rewards over time

```
Analysis of Variance Table

Response: reward
             Df    Sum Sq Mean Sq F value     Pr(>F)
time          1    157799  157799     1561 < 2.2e-16 ***
Residuals 639511 64648278     101
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' '
```

Regression analysis of observed rewards over time

Linear Regression (95% confidence)