Traffic Violations

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Data Inspection

- **Dataframe 1:** (StopData1.csv) {stop_id, officer_id, driver_id, driver_age, driver_sex, ticket}
- **Dataframe 2:** (StopData2.csv) {stop_id, ward}
- **Dataframe 3:** (CourtsData.csv) {stop_id, ticket_ amount, status}

Part- 1

1. How many traffic stops are in the data
2. How many different drivers were stopped?
3. What is the average age of those stopped?
4. What proportion of the stops are men?
5. Which ward has the highest average age of those stopped?
6. What is the probability of a female age 30 receiving a ticket?
7. Compared to a female driver of the same age who is stopped, how much more likely or less likely to get a ticket is a male driver?

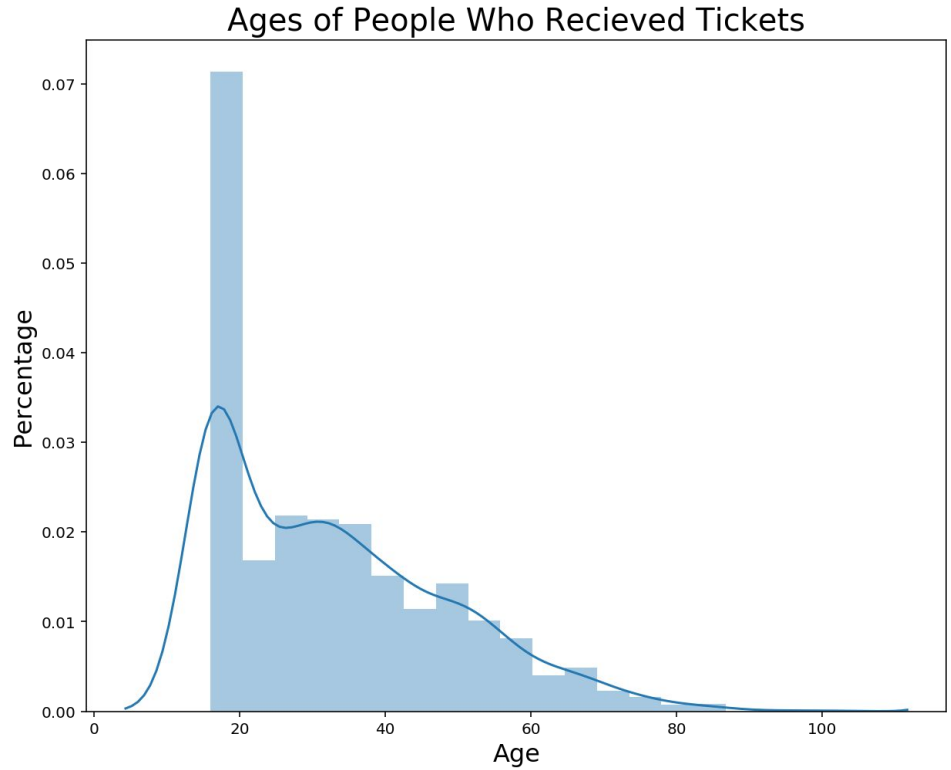
Process

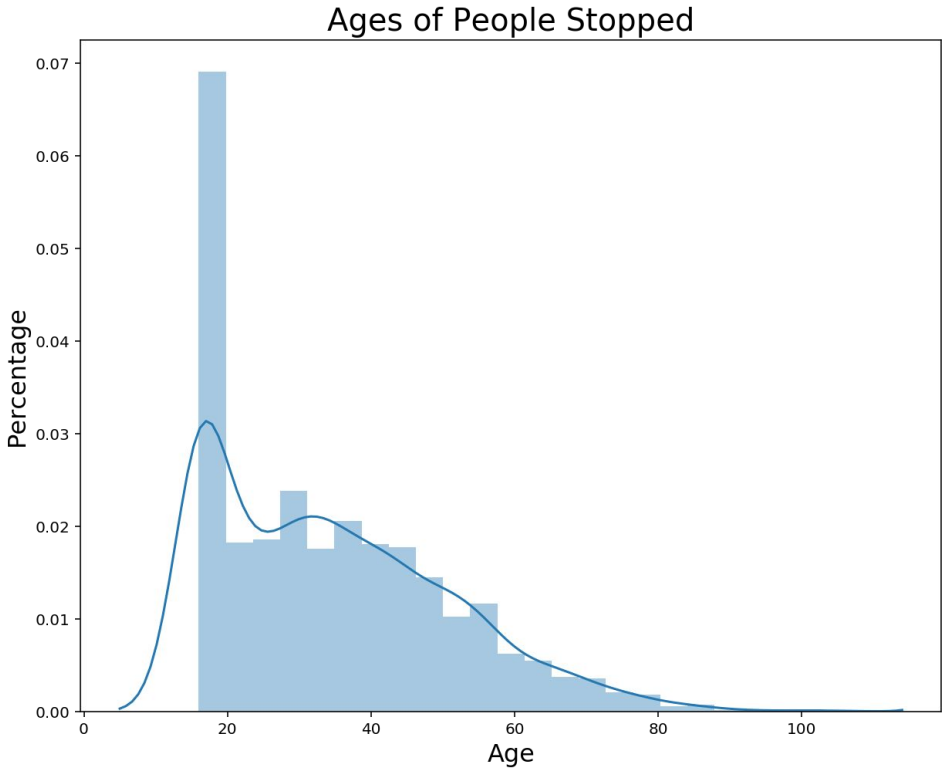
Data Cleaning

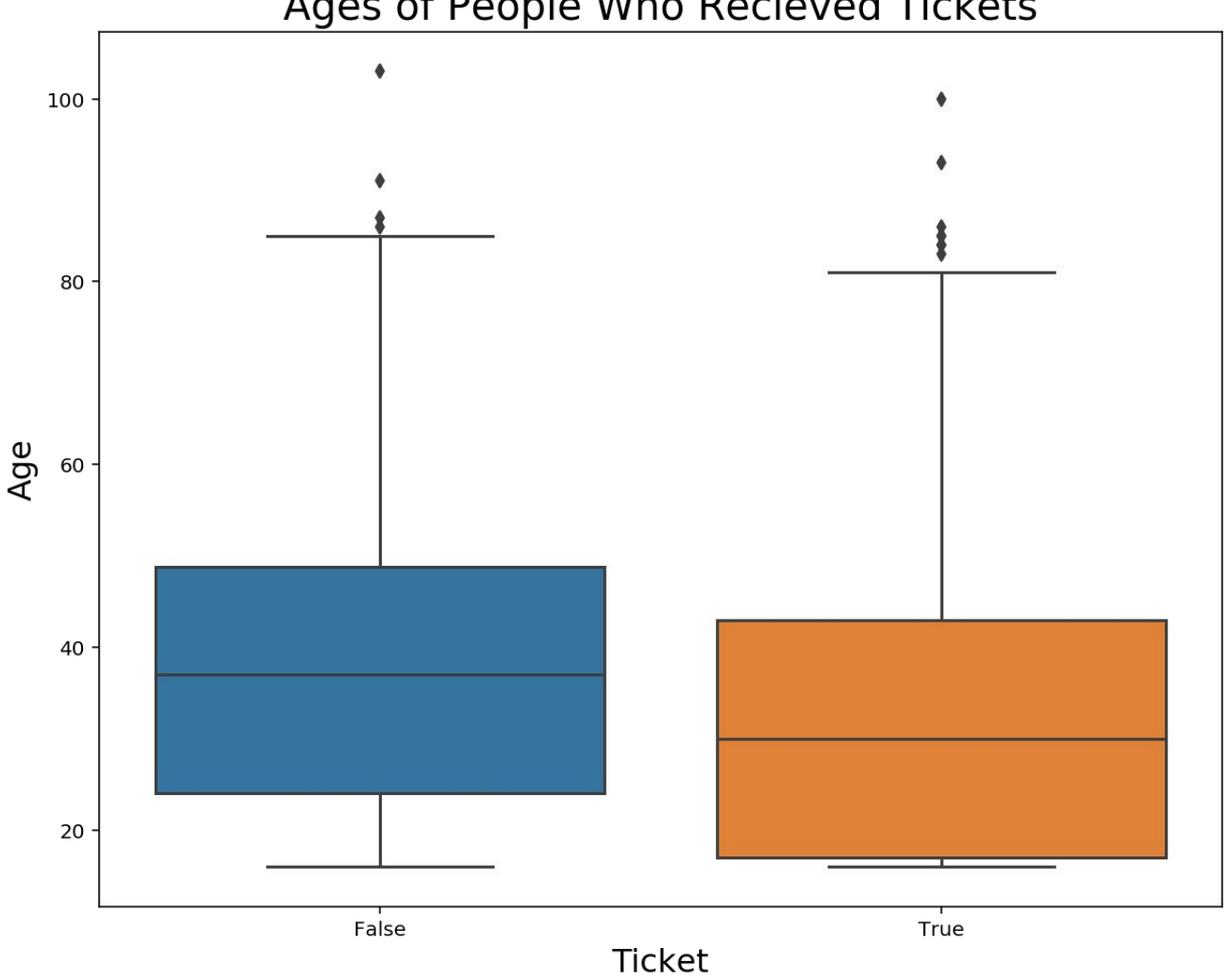
- Court Data CSV had irregular rows (some had 3 values, some had 4)
- The extra values were supposed to be part of the amount column
- Joining together and lining up this data was difficult
- Converting data types
- Dummifying and mapping properly
- Concatenating the data frames by stop id

Findings

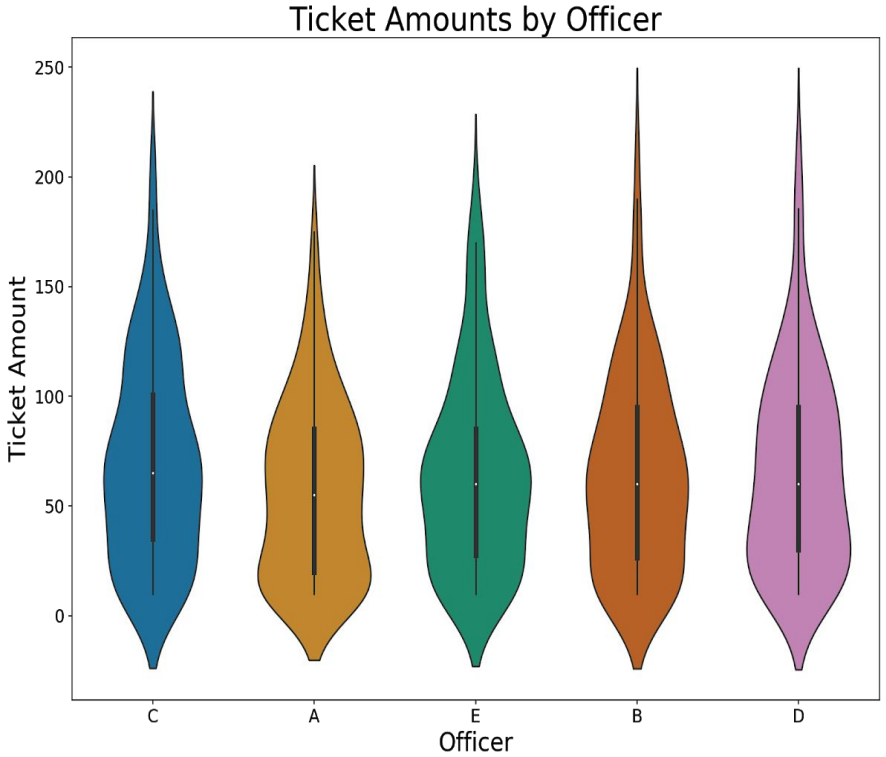
- There are 2324 traffic stops
- 1851 different drivers
- Average age 34
- 51% men
- 49% women
- Highest Average age ward 36
- Probability of a female age 30 receiving a ticket 79%
- Probability of a female age 30 receiving a ticket 77%

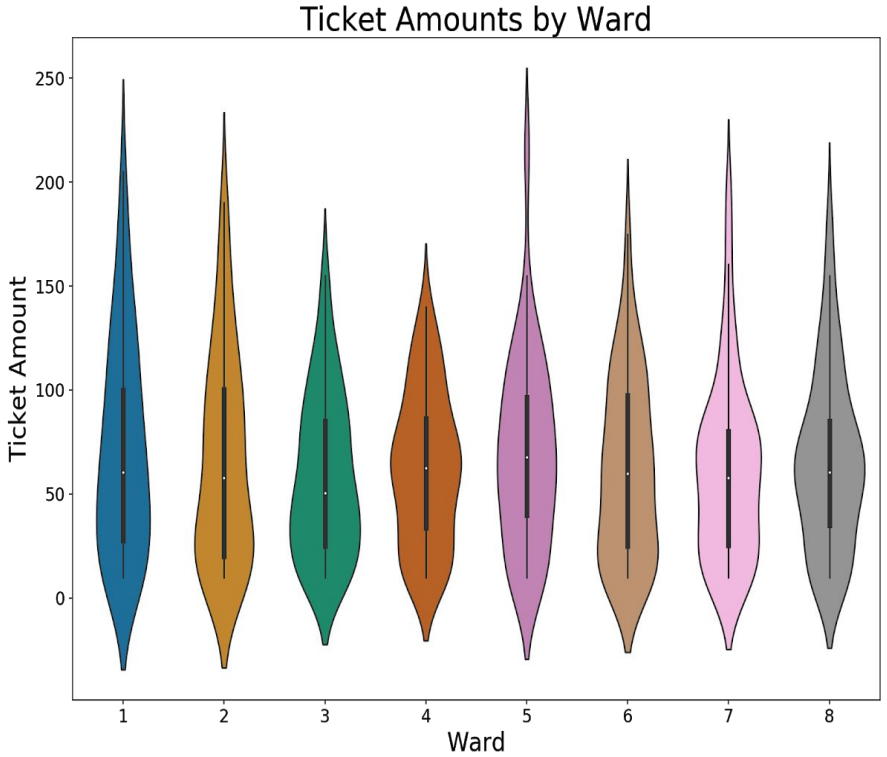

Ages of People Who Recieved Tickets
Percentage
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0
20
40
60
80
100
Age

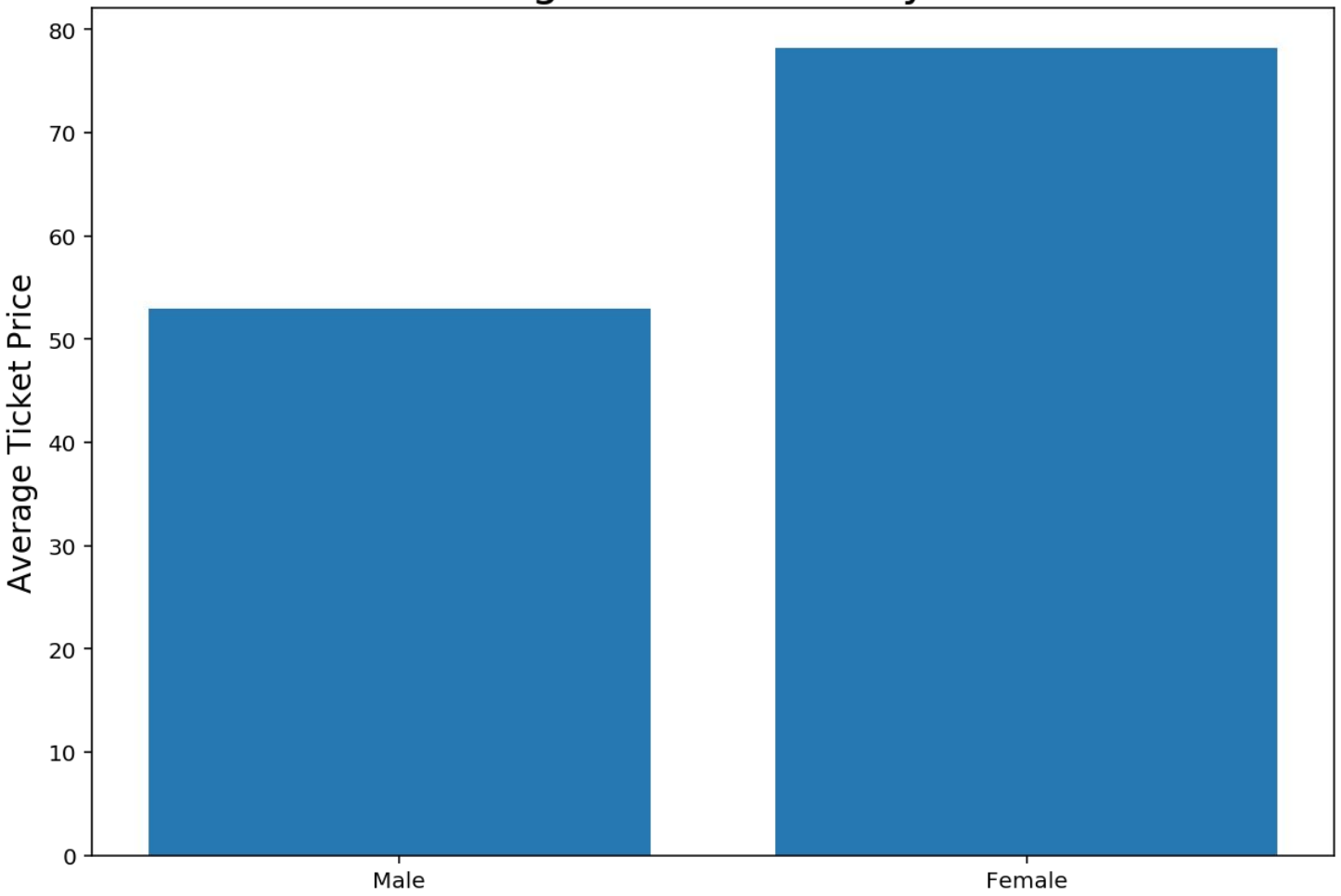

Ages of People Stopped
Percentage
0.00
0.01
0.02
0.03
0.04
0.05
0.06
0.07
0
20
40
60
80
100
Age

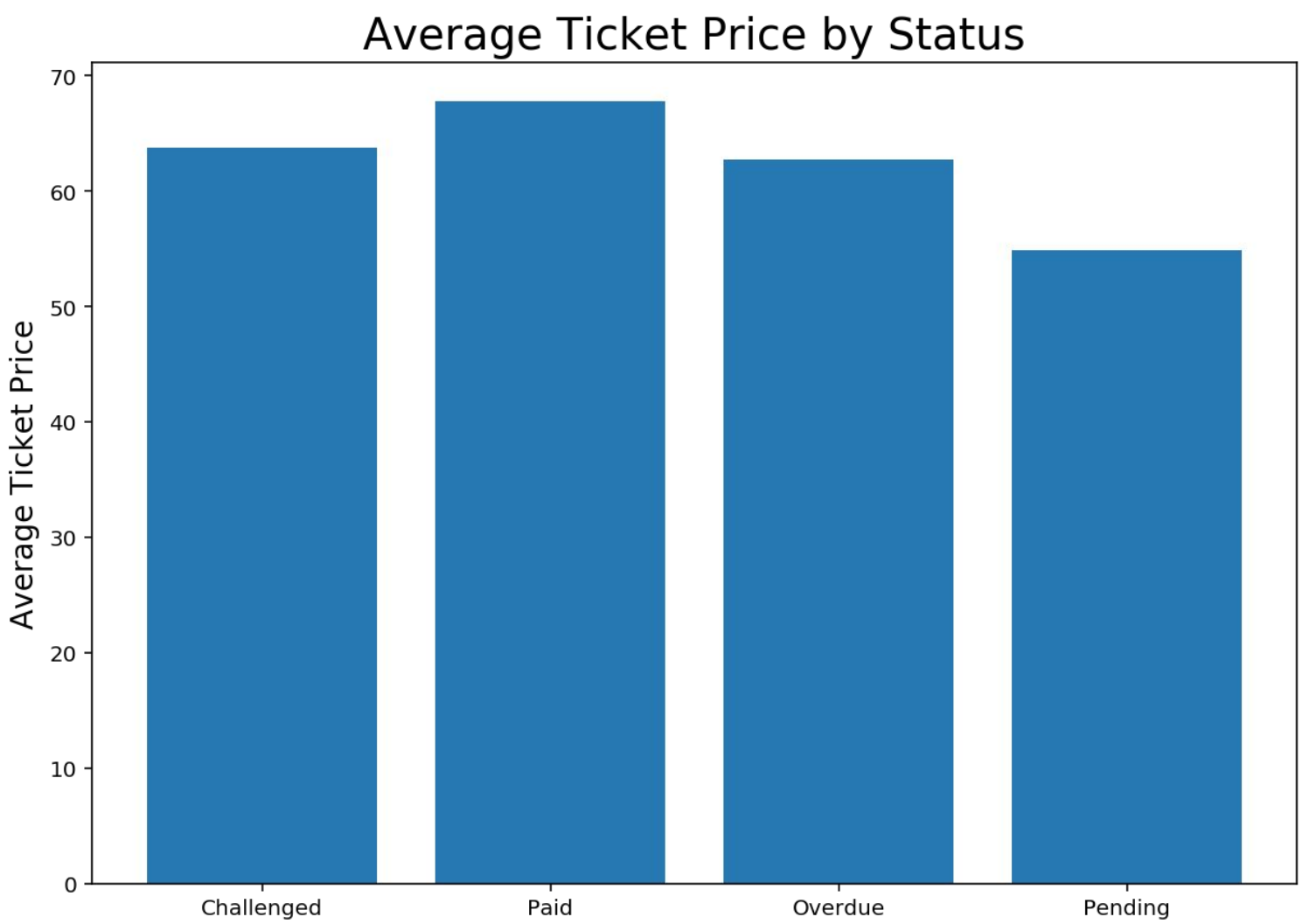

Ages of People Who Recieved Tickets
100
80
60
40
20
Age
False
True
Ticket

Tickets


Ticket Amounts by Officer
Ticket Amount
250
200
150
100
50
0
C
A
E
B
D
Officer


Ticket Amounts by Ward
Ticket Amount
250
200
150
100
50
0
1
2
3
4
5
6
7
8
Ward


Average Ticket Price by Sex
Average Ticket Price
0
10
20
30
40
50
60
70
80
Male
Female


Average Ticket Price by Status
Average Ticket Price
70
60
50
40
30
20
10
0
Challenged
Paid
Overdue
Pending

Questions ?