Chrome Developer Tools

Demo

Accessing Chrome developer tools

Using developer tools panes

Editing styles to visualize selectors

Generating CSS selectors inside Chrome

Generating XPath selectors inside Chrome

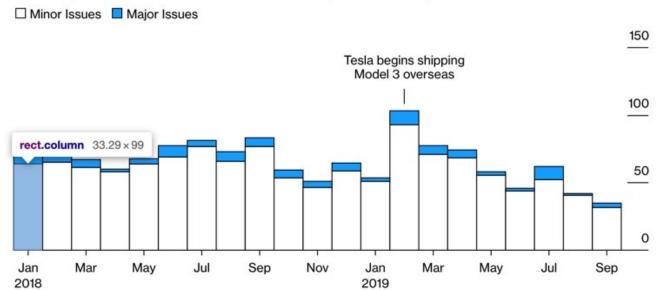
Real world challenges



first month of ownership. Customers were asked to categorize each defect as a "major" or "minor" issue.

Quality Improves in 2019

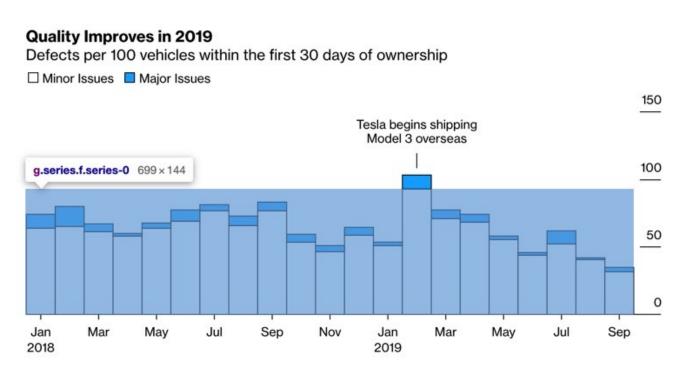
Defects per 100 vehicles within the first 30 days of ownership



The worst single month for Tesla defects was February 2019, which recorded 101 issues for every 100 cars sold. That's when Tesla began overseas exports amid a dizzying stretch of changes to production and logistics that led to half of the quarter's deliveries rushed out in the final 10 days.

```
R O
           Elements
                                 Sources
                                                      3 A 3
                  ▼<g class="draw-container column simple-column-stacke
                  d" transform="translate(0,0)">
                      <rect class="extents" x="0" y="0" width="699"
                      height="233"></rect>
                    ▶ <q class="grid" fill="none" font-size="10" font-
                    family="sans-serif" text-anchor="start" transform="tr
                    anslate(0,0)">...</g>
                    ▼<g class="series f series-0" style="fill: rgb(255,</pre>
                    255, 255); stroke: rgb(0, 0, 0);">
                       <rect class="column" x="0" y="134" width="33.2857
                       14285714285" height="99"></rect> == $0
                       <rect class="column" x="33.285714285714285" y="13
                       2" width="33.285714285714285" height="101">
                       </rect>
... .draw-container.column.simple-column-stacked g.series.f.series-0 rect.column
Styles
        Computed
                    Layout Event Listeners
                                             DOM Breakpoints
                                                       :hov .cls + 4
Filter
element.style {
.dvz-content * {
                                                               index.css:1
  margin: ▶ 0;
  padding: ▶ 0;
rect[Attributes Style] {
  x: 0;
  y: 134;
  width: 33.2857;
  height: 99;
:not(svg) {
                                                     user agent stylesheet
  transform-origin: 0px 0px;
Inherited from a. series.f. series-0
```

The lower part of graph in series 0

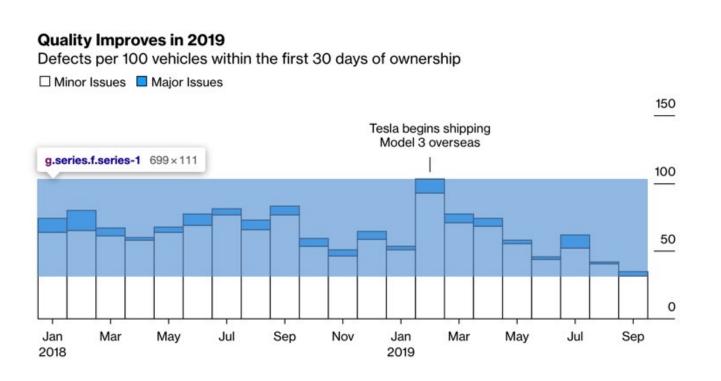


The worst single month for Tesla defects was February 2019, which recorded 101 issues for every 100 cars sold. That's when Tesla began overseas exports amid a dizzying stretch of changes to production and logistics that led to half of the quarter's deliveries rushed out in the final 10 days.

```
height="233"></rect>
                    ▶ <g class="grid" fill="none" font-size="10" font-
                    family="sans-serif" text-anchor="start" transform="tr
                   anslate(0,0)">...</g>
                    ▶<q class="series f series-0" style="fill: rgb(255,</pre>
                   255, 255); stroke: rqb(0, 0, 0); ">...</q> == $0
                    ▶ <q class="series f series-1" style="fill: rqb(0, 17
                   4, 255); stroke: rgb(0, 0, 0);">...</g>
                   ▶ <q class="annotations">...</q>
                    ▶ <q class="tooltip-container">...</q>
             g.draw-container.column.simple-column-stacked g.series.f.series-0
                    Layout Event Listeners
                                            DOM Breakpoints >>
        Computed
                                                      :hov .cls + 4
Filter
element.style {
  fill: _rgb(255, 255, 255);
  stroke: ■rgb(0, 0, 0);
.toaster-theme-business.quad-colors .f.series-0,
                                                            business.css:1
.toaster-theme-business.quad-colors .line-area.series-0
  fill: #000;
.toaster-theme-business.bar-colors .f.series-0,
                                                            business.css:1
.toaster-theme-business.bar-colors .line-area.series-0 {
  fill: #000;
.toaster-theme-business.quad-colors .bg.series-0,
                                                            business.css:1
.toaster-theme-business.quad-colors .series-0 {
  background-color: #000;
```

Verify by expanding the values

The upper part in series 1



```
<rect class="extents" x="0" y="0" width="699"
                      height="233"></rect>
                    ▶ <q class="grid" fill="none" font-size="10" font-
                    family="sans-serif" text-anchor="start" transform="tr
                    anslate(0,0)">...</g>
                    ▶ <g class="series f series-0" style="fill: rgb(255,
                    255, 255); stroke: rgb(0, 0, 0);">...</g>
                    ▶ <g class="series f series-1" style="fill: rgb(0, 17
                    4, 255); stroke: rgb(0, 0, 0);">...</g> == $0
                    ▶ <q class="annotations">...</q>
                    > <q class="tooltip-container">...</q>
    g.margin g.draw-container.column.simple-column-stacked g.series.f.series-1
                             Event Listeners
                                             DOM Breakpoints >>
 Styles
        Computed
                    Layout
                                                       :hov .cls + 4
Filter
element.style {
  fill: rqb(0, 174, 255);
  stroke: ■rgb(0, 0, 0);
.toaster-theme-business.quad-colors .f.series-1,
                                                            business.css:1
.toaster-theme-business.guad-colors .line-area.series-1
  fill: #ff008c:
.toaster-theme-business.bar-colors .f.series-1,
                                                            business.css:1
```

Verify by expanding the values

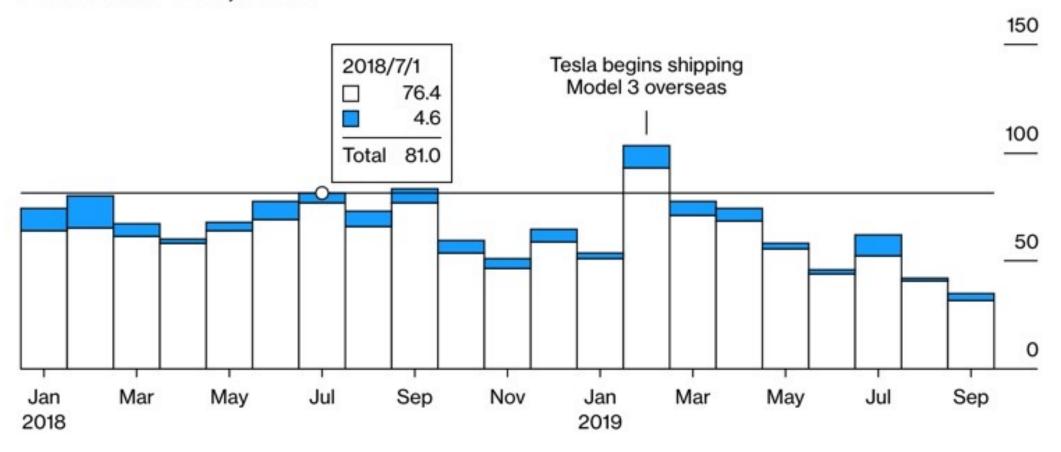
This is the data we are interested in

Problem: Not available (Generated by Java Script)

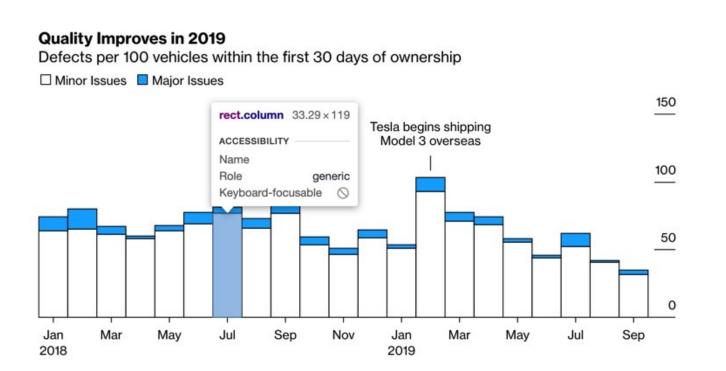
Quality Improves in 2019

Defects per 100 vehicles within the first 30 days of ownership

☐ Minor Issues ☐ Major Issues



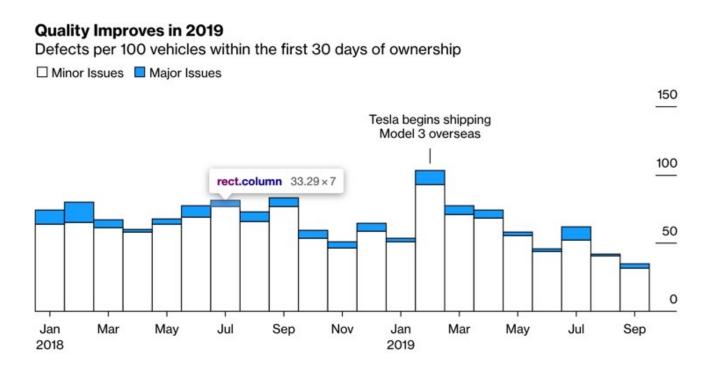
Solution: Inspect the column its height is 119

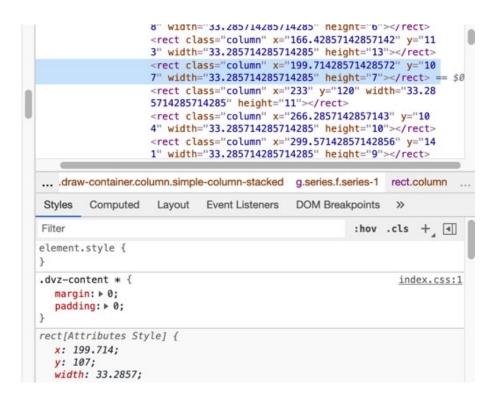


```
<rect class="column" x="166.4285/14285/142" y="12
                   6" width="33.285714285714285" height="107">
                   <rect class="column" x="199.71428571428572" y="11
                   4" width="33.285714285714285" height="119">
                   </rect> == $0
                   <rect class="column" x="233" y="131" width="33.28
                   5714285714285" height="102"></rect>
                   <rect class="column" x="266.2857142857143" y="11
                   4" width="33.285714285714285" height="119">
                   </rect>
.....draw-container.column.simple-column-stacked
                                            g.series.f.series-0 rect.column
        Computed Layout Event Listeners
                                            DOM Breakpoints >>
Filter
                                                       :hov .cls + ◀
element.style {
.dvz-content * {
                                                              index.css:1
  margin: ▶ 0;
  padding: ▶ 0;
rect[Attributes Style] {
  x: 199.714;
  y: 114;
  width: 33.2857;
```

Task: Get the top part of that column

Task: Get the top part of that column

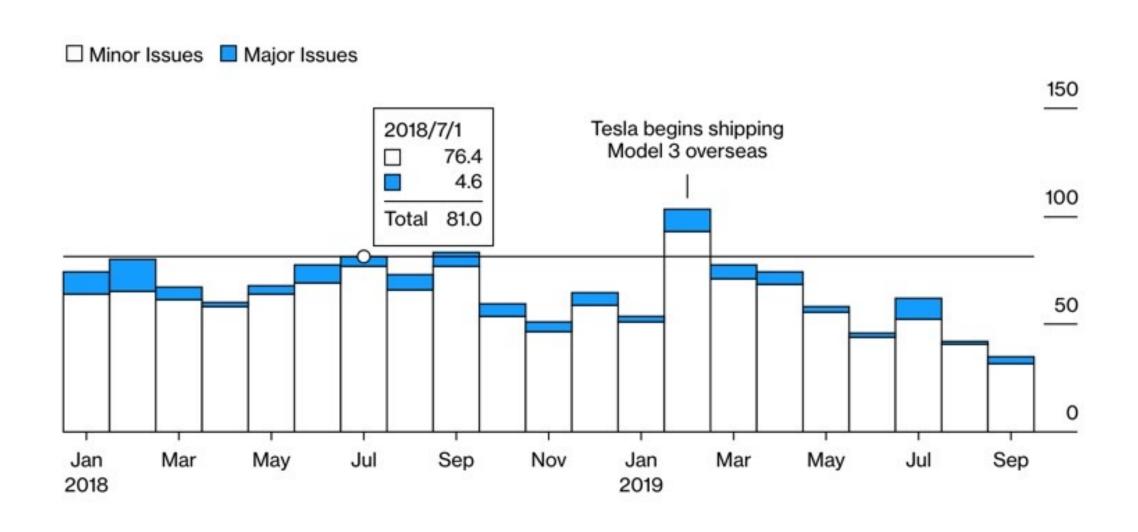




It has height 7

Height 119 Maps to 76.4 and Top part height 7 maps to 4.6

Scrape the table and apply the ratios to get the data



Summary

HTML & CSS selectors

XPath selectors

Chrome developer tools