



# Online Search Engine Advertising Data Visualization Tool - a **crossfilter** application

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# Crossfilter

- **Fast Multidimensional Filtering**
- **for Coordinated Views**

# Crossfilter

- Speed

- Demo: [elastic lists](#)

```
data.csv
1 Keyword,Position,Previous Position,Volume,CPC,Url,Traffic,Traffic Cost ($)
2 expedia,1,1,6120000,0.08,http://www.expedia.com/,20.21,1.11,0.12,1110000
3 cheap flights,3,3,2240000,1.94,http://www.expedia.com/Flights,1.41,1.90,
4 expedia.com,1,1,368000,0.05,http://www.expedia.com/,1.21,0.04,0.12,11100
5 delta airlines,3,3,1830000,0.25,http://flights.expedia.com/delta-air-lin
6 cheap tickets,2,2,1000000,1.62,http://www.expedia.com/Flights,0.91,1.02,
7 expedia flights,1,1,201000,0.11,http://www.expedia.com/Flights,0.66,0.05
8 hotels,3,3,823000,1.83,http://www.expedia.com/Hotels,0.52,0.65,0.76,1540
9 expedia hotels,1,1,135000,0.42,http://www.expedia.com/Hotels,0.44,0.12,0
10 airtran,3,3,673000,0.36,http://flights.expedia.com/airtran-airways-reser
11 flights,3,3,550000,1.58,http://www.expedia.com/Flights,0.34,0.38,0.75,64
12 airline tickets,3,2,550000,1.66,http://www.expedia.com/,0.34,0.39,0.88,4
13 hotels.com,11,11,1000000,1.12,http://www.expedia.com/Hotels,0.33,0.25,0.
14 vacation packages,1,1,90500,2.67,http://www.expedia.com/Vacation-Package
15 www.expedia.com,1,1,90500,0.06,http://www.expedia.com/,0.29,0.01,0.13,11
16 jetblue,12,12,2740000,0.11,http://flights.expedia.com/jetblue-airways-re
17 cheap airline tickets,2,2,246000,2.00,http://www.expedia.com/Flights,0.2
18 google flights,4,5,450000,1.79,http://flights.expedia.com/,0.22,0.27,0.0
19 all inclusive vacations,1,1,60500,3.52,http://www.expedia.com/All-Inclus
20 cheaptickets,2,2,201000,0.92,http://www.expedia.com/Flights,0.18,0.11,0.
21 expedia flights,2,2,201000,0.11,http://www.expedia.com/flight-deals,0.18
22 hotels near me,3,2,246000,1.57,http://www.expedia.com/Hotels,0.15,0.16,0
23 hotel,2,2,165000,2.43,http://www.expedia.com/Hotels,0.15,0.25,0.72,32000
24 car rental,11,10,450000,3.35,http://www.expedia.com/Cars,0.14,0.34,0.90,
25 expedia,1,1,40500,0.12,http://www.expedia.com/,0.13,0.01,0.14,1110000000
26 budget car rental,5,4,368000,1.19,http://www.expedia.com/daily/advert/ca
27 plane tickets,3,3,201000,1.26,http://www.expedia.com/,0.12,0.11,0.73,197
28 expedia flights,3,4,201000,0.11,http://www.expedia.com/Destinations-In-U
29 all inclusive resorts,2,2,135000,3.20,http://www.expedia.com/All-Inclusi
30 travel,2,2,135000,1.55,http://www.expedia.com/,0.12,0.13,0.78,3470000000
31 airfare,2,2,135000,1.61,http://www.expedia.com/,0.12,0.13,0.81,642000000
32 expedia hotels,2,2,135000,0.42,http://www.expedia.com/hotel-deals,0.12,0
33 aeromexico,4,4,246000,0.68,http://flights.expedia.com/aeromexico-reserva
34 hotels near me,4,3,246000,1.57,http://www.expedia.com/Maine-Mall-Hotels.
35 cheap hotels,4,4,246000,2.76,http://www.expedia.com/Hotels,0.12,0.23,0.9
36 expedia coupon,1,1,33100,2.61,http://www.expedia.com/p/info-other/expedi
37 expedia hotel,1,1,33100,0.19,http://www.expedia.com/Hotels,0.10,0.01,0.2
38 expedia flight 1 1 33100 0.10 http://www.expedia.com/Flights 0.10 0.00 0
```

# Online Advertising

- Website: **expedia.com**
- Keyword: “flights to boston”, “cheap hotels near me”, “flights to Chicago”
  - Live demo on Google

# Optimize Ads Campaign

- Report & Data
- SEMrush.com
  - Regular users, can't afford expensive services, want data without limitation on the domain and keywords
  - Live demo on [semrush.com](https://www.semrush.com)

# What do we want?

- Features for an ideal visualization tool
  - Browser-based
  - Fast & efficient
  - Multiple views for different dimensions
  - Easy and straightforward to interact with

# My new visualization tool

- Live demo.

# My new visualization tool

- Good:
  - Scale.
  - Fast in three ways.
  - Browser-based.
  - Multiple views.
- Limitation:
  - Limitation on precise value
  - More details in the result list



# Thanks

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