



**Kanton Zürich
Statistisches Amt**

ZURICH REAL ESTATE APP

**A SHINY APP FOR
THE ZURICH REAL ESTATE MARKET**

**MAX GRÜTTER
STATISTICAL OFFICE OF THE CANTON OF ZURICH**

ERUM 2018, MAY 14 2018

ZURICH REAL ESTATE DATA

A UNIQUE AND COMPLETE
DATASET, WHICH YOU CAN
FIND ON OUR HOMEPAGE:
STATISTIK.ZH.CH/IMMOMARKT



THE TOOLS NO
LONGER MEET THE
NEEDS OF OUR
CUSTOMERS

ZHRE APP: CONCEPT



SHINY UI

fluidPage with sidebarLayout and
fluidRow

Control widgets:
sliderInput, **slectInput**,
bookmarkButton

Reset with **actionButton** and **shinyjs**
conditionalPanel
tabsetPanel

filter, mutate, render

SHINY SERVER

reactive({})
dplyr::filter
distr::dcc6
leaflet
ggplot2
plotly



Reset inputs [Bookmark this APP state](#)

Land Characteristics

Location Quality (mkt)

very moderate

Location Quality (mkt)

very good

Distance to Zurich city center (km)

0 25

Distance to Lake Zurich (km)

0 10.00

Land area (m²qm)

-10 10000

House or Apartment Characteristics

Number of rooms (mkt)

1 room

Number of Rooms (mkt)

7+ rooms

Living space in m²

0 100

Construction year

after 1900 1900 2017

Year of sale

2007

2017

Type of Property

Detached House

Regional level

Canton of Zurich

Data

Map

Graphics

Igraphics

Explanations

Number of sales and prices in CHF

Year	Number of Observations	Price (Mean)	Price (sd)	Price (Q1)	Price (Median)	Price (Q3)
TOTAL	19'000	1'147'000	629'000	764'000	972'000	1'328'000
2007	1'715	946'000	543'000	645'000	801'000	1'039'000
2008	1'685	966'000	555'000	667'000	815'000	1'063'000
2009	1'818	989'000	510'000	694'000	863'000	1'131'000
2010	1'863	1'077'000	607'000	734'000	901'000	1'229'000
2011	1'752	1'122'000	647'000	753'000	939'000	1'284'000
2012	1'715	1'183'000	611'000	803'000	1'018'000	1'376'000
2013	1'567	1'224'000	675'000	810'000	1'040'000	1'401'000
2014	1'673	1'221'000	621'000	834'000	1'064'000	1'381'000
2015	1'803	1'268'000	625'000	874'000	1'118'000	1'448'000
2016	1'761	1'281'000	662'000	870'000	1'110'000	1'470'000
2017	1'648	1'361'000	695'000	915'000	1'187'000	1'549'000

Download

MAXZH.SHINYAPPS.IO/
ZHREAPP

ZHRE APP: SOLVED CHALLENGES

DATA PROTECTION

→ hexagon instead of exact coordinates

ONE APP FOR THREE STATISTICS

→ `conditionalPanel()`

GREAT FLEXIBILITY OF THE QUERY

→ `full Dataset & distr::dcc6`

DOWNLOAD OF CALCULATED DATA AND GRAPHS

→ `reactive({}) & downloadHandler()`

VISUALISATION IN A MAP

→ `reactive({}) & leaflet()`

WARNING IF NUMBER OF OBSERVATION IS TO LOW

→ `modalDialog()`

ZHRE APP: PENDING CHALLENGES

DOWNLOAD DATA AS EXCEL INCLUDING FILTERSETTINGS

→ work in progress. I've already tried a lot.....

USABILITY ON MOBILE DEVICES

→ solution without compromising flexibility?

SCALABILITY: ONE APP FOR MANY USERS

→ this becomes important as soon as we make the app available to our customers

NO REDRAWING OF THE MAP IF FILTERS ARE CHANGED

→ should be possible with `leafletProxy()`

SELECTION WITHIN THE MAP

→ should be possible with `crosstalk()`

Thank you!

TRY OUT & PLAY
YOURSELF:

MAXZH.SHINYAPPS.IO/ZHREAPP

FIND THE CODE OFF THE APP
ON MY GITHUB ACCOUNT:

GITHUB.COM/MXGRTTR/ZHREAPP

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