



**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 21 2018

# ZURICH REAL ESTATE DATA

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



THE TOOLS NO LONGER  
MEET THE NEEDS OF  
OUR CUSTOMERS

# ZHRE APP: CONCEPT



## SHINY UI

fluidPage with sidebarLayout and  
fluidRow

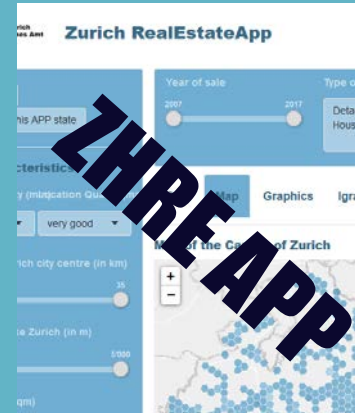
Control widgets:  
sliderInput, selectInput,  
bookmarkButton

Reset with actionButton and shinyjs  
conditionalPanel  
tabsetPanel

filter, mutate, render

## SHINY SERVER

```
reactive({})  
dplyr::filter  
distr::dcc6  
leaflet  
gplot2  
plotly
```





Kanton Zürich  
Statistisches Amt

## Zurich RealEstateApp

Reset inputs

Bookmark this APP state

### Land Characteristics

Location Quality (min)

very moderate

Location Quality (max)

very good

Distance to Zurich city centre (in km)



Distance to Lake Zurich (in m)



Land area (in sqm)



### House or Apartment Characteristics

Number of rooms (min)

1 room

Number of Rooms (max)

7+ rooms

Living space in sqm



Construction year

after 1900



Year of sale

2007

2017

Type of Property

Detached House

Regional level

Canton of Zurich

Data

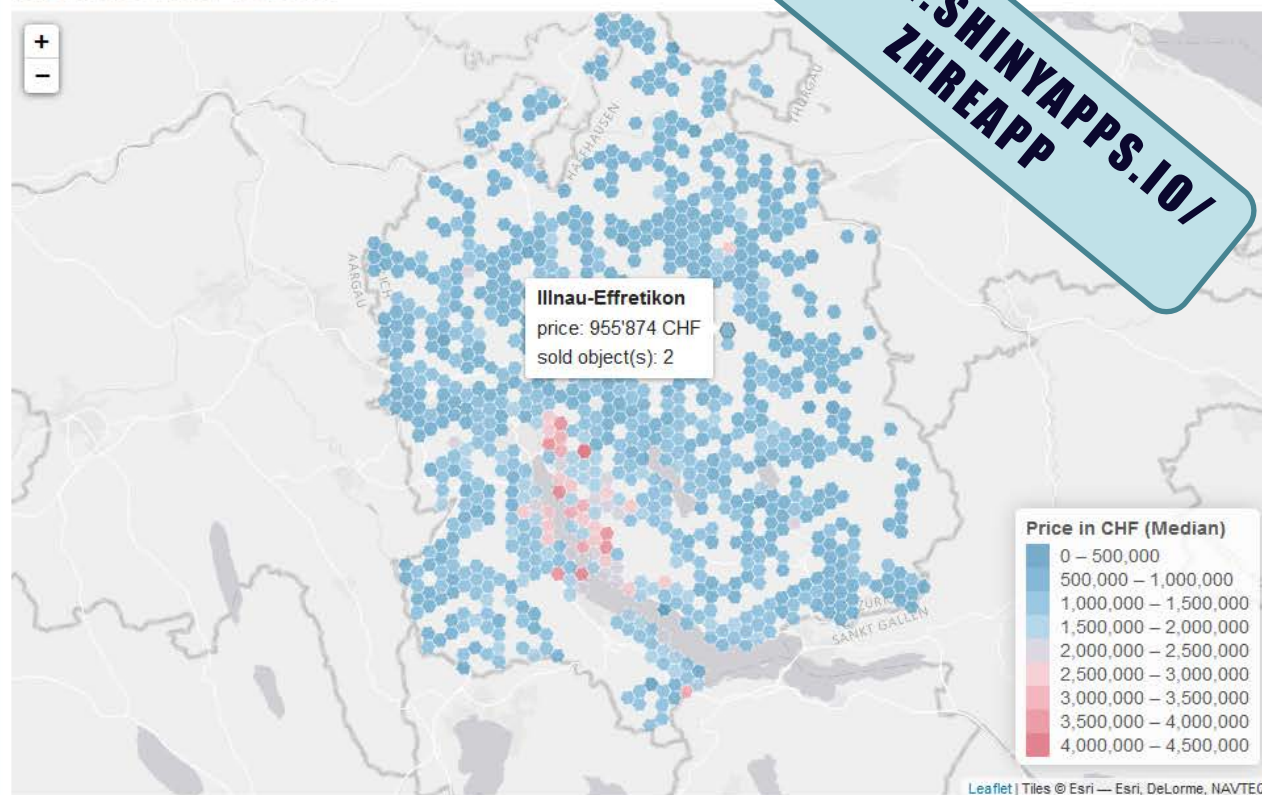
Map

Graphics

Igraphics

Explanations

### Map of the Canton of Zurich



MAXZH.SHINYAPPS.IO/  
ZHREAPP

# ZHRE APP: SOLVED CHALLENGES

## DATA PROTECTION

→ hexagon instead of exact coordinates

## ONE APP FOR THREE STATISTIC

→ `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

## USABILITY ON MOBILE DEVICES

→ solution without compromising flexibility?

## NO REDRAWING OF THE MAP IF FILTERS ARE CHANGED

→ should be possible with `leafletProxy()`

## SELECTION WITHIN THE MAP

→ should be possible with `crosstalk()`

## DOWNLOAD DATA AS EXCEL INCLUDING FILTERSETTINGS

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

## SCALABILITY: ONE APP FOR MANY USERS

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

# Thank you!

TRY OUT & PLAY  
YOURSELF:

`MAXZH.SHINYAPPS.IO/ZHREAPP`

FIND THE CODE OFF THE APP  
ON MY GITHUB ACCOUNT:

`GITHUB.COM/MXGRITTER/ZHREAPP`

KEEP IN TOUCH:

@MAXGRUETTER

`MAX.GRUETTER@STATISTIK.JI.ZH.CH`

