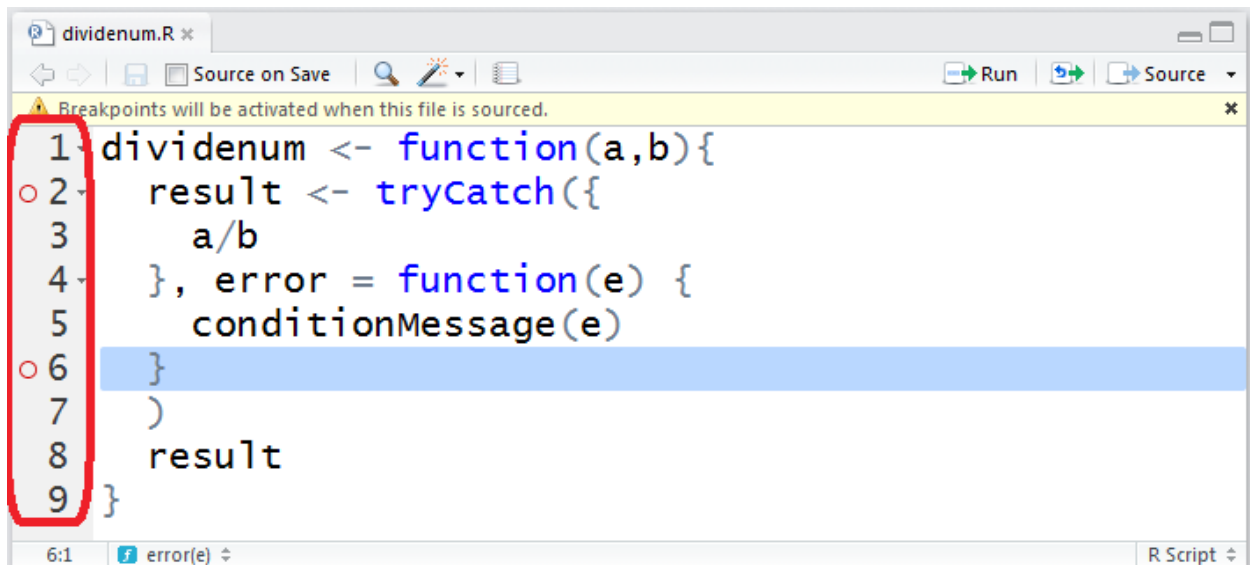
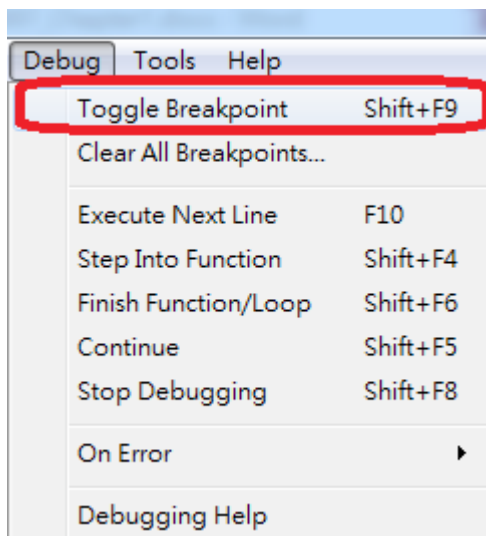


Chapter 1: Functions in R



The image shows a screenshot of the RStudio interface. The top pane is the source editor, displaying the following R code:

```
1 dividenum <- function(a,b){  
2   result <- tryCatch({  
3     a/b  
4   }, error = function(e) {  
5     conditionMessage(e)  
6   })  
7   result  
8 }  
9 }
```

The line number 6 is highlighted in blue. In the top right corner of the source editor, the 'Source' button is circled in red. The bottom pane is the console, showing the command:

```
> debugSource('D:/OS DATA/Desktop/dividenum.R')  
> |
```

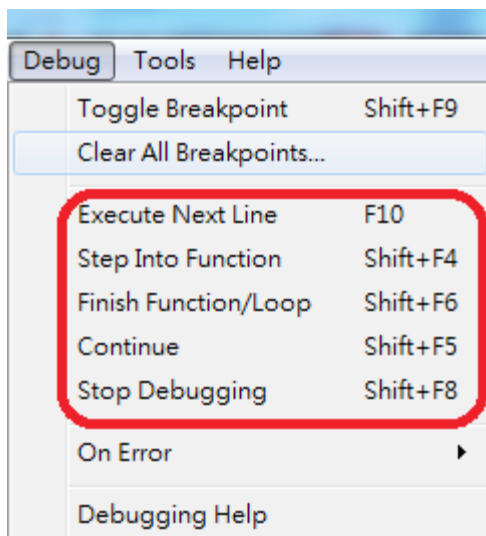
The status bar at the bottom of the source editor shows '6:1' and 'error(e)'. The console status bar shows 'R Script'.

The screenshot shows an R IDE window titled "dividenum.R". The source editor contains the following R code:

```
1- dividenum <- function(a,b){
2-   result <- tryCatch({
3-     a/b
4-   }, error = function(e) {
5-     conditionMessage(e)
6-   })
7-   result
8- }
```

The console window shows the following output:

```
> debugSource('D:/OS DATA/Desktop/dividenum.R')
> dividenum(3,"error")
Called from: eval(expr, envir, enclos)
Browse[1]> n
debug at D:/OS DATA/Desktop/dividenum.R#2: {
  .doTrace(browser())
  result <- tryCatch({
    a/b
```



Chapter 2: Data Extracting, Transforming, and Loading

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Enter Symbol Look Up Fri, Jul 3, 2015, 3:17AM EDT - U.S. Markets closed for Independence Day Report an Issue

Dow ↓0.16% Nasdaq ↓0.08%

More On ^GSPC

S&P 500 (^GSPC) - SNP ★ Watchlist [Add to Portfolio](#)

2,076.78 ↓0.64(0.03%) Jul 2

QUOTES Summary Components Options

Historical Prices Get Historical Prices for: GO

Set Date Range

Start Date: Jan 3 1950 Eg. Jan 1, 2010

End Date: Jul 3 2015

Daily
 Weekly
 Monthly
 Dividends Only

Get Prices

Prices

Date	Open	High	Low	Close	Volume	Adj Close*
Jul 2, 2015	2,078.03	2,085.06	2,071.02	2,076.78	2,996,540,000	2,076.78
Jul 1, 2015	2,067.00	2,082.78	2,067.00	2,077.42	3,727,260,000	2,077.42
Jun 30, 2015	2,061.19	2,074.28	2,056.32	2,063.11	4,078,540,000	2,063.11
Jun 29, 2015	2,098.63	2,098.63	2,056.64	2,057.64	3,678,960,000	2,057.64

First | Previous | Next | Last

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Apr 13, 2015	2,102.03	2,107.03	2,092.33	2,092.43	2,908,420,000	2,092.43
Apr 10, 2015	2,091.51	2,102.61	2,091.51	2,102.06	536,200,000	2,102.06
Apr 9, 2015	2,081.29	2,093.31	2,074.29	2,091.18	3,172,360,000	2,091.18
Apr 8, 2015	2,076.94	2,086.69	2,073.30	2,081.90	3,265,330,000	2,081.90
Apr 7, 2015	2,080.79	2,089.81	2,076.10	2,076.33	3,065,510,000	2,076.33
Apr 6, 2015	2,064.87	2,086.99	2,056.52	2,080.62	3,302,970,000	2,080.62
Apr 2, 2015	2,060.03	2,072.17	2,057.32	2,066.96	3,095,960,000	2,066.96
Apr 1, 2015	2,067.63	2,067.63	2,048.38	2,059.69	3,543,270,000	2,059.69
Mar 31, 2015	2,084.05	2,084.05	2,067.04	2,067.89	3,376,550,000	2,067.89

* Close price adjusted for dividends and splits.

First | Previous | Next | Last

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Currency in USD.

Ad Topics That Might Interest You...

- 10 Best Mutual Funds
- Best Dividend ETFs to Buy
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NYC Wi-Fi Hotspot Locations
 Wi-Fi Providers: AT&T (Free). Wi-Fi access is free for all users at all times. Partners: >

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Export

Download a copy of this dataset in a static format

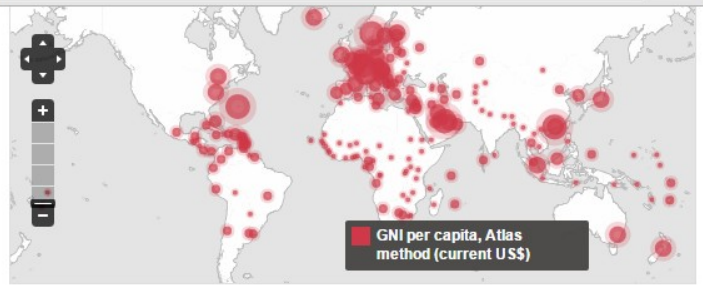
Download Geospatial Data

- Download As
 - KML
 - KMZ
 - Shapefile
 - Original
- Download without Geospatial Data
 - Download As
 - CSV**
 - JSON

1	STN---	WBAN	YEARMODA	TEMP	MAX	MIN
2	008403	99999	20140101	85.8 24	102.7*	69.3*
3	008403	99999	20140102	86.3 24	102.9*	71.1*
4	008403	99999	20140103	85.9 24	101.1*	72.0*
5	008403	99999	20140104	85.6 24	102.7*	70.5*
6	008403	99999	20140105	84.8 23	102.0*	66.6*

other collections such as Gender Statistics, African Development Indicators, and Education Statistics.

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Arab World	\$7,582 2013
Caribbean small states	\$9,219 2013
Central Europe and the Baltics	\$13,537 2014
East Asia & Pacific	\$6,122 2014
Euro area	\$39,174 2014
European Union	\$35,673 2014
Europe & Central Asia	\$6,864 2014
Fragile and conflict affected situations	\$1,565 2014
Latin America & Caribbean	\$9,051 2014
Least developed countries: UN classification	\$928 2014

en/topic/3?downloadformat=excel

worldbank5.xls [相容模式] - Microsoft Excel

新總明體 11

Country Name	Country Code	Indicator Name	Indicator Code	1960	1961
Aruba	ABW	Trade in services (% of GDP)	BG.GSR.NFSV.GD.ZS		
Aruba	ABW	Communications, computer, etc. (% of service imports, BoP)	BM.GSR.CMCP.ZS		
Aruba	ABW	Primary income payments (BoP, current US\$)	BM.GSR.FCTY.CD		
Aruba	ABW	Imports of goods and services (BoP, current US\$)	BM.GSR.GNFS.CD		
Aruba	ABW	Goods imports (BoP, current US\$)	BM.GSR.MRCH.CD		
Aruba	ABW	Service imports (BoP, current US\$)	BM.GSR.NFSV.CD		
Aruba	ABW	Charges for the use of intellectual property, payments (BoP, current US\$)	BM.GSR.ROYL.CD		
Aruba	ABW	Imports of goods, services and primary income (BoP, current US\$)	BM.GSR.TOTL.CD		
Aruba	ABW	Transport services (% of service imports, BoP)	BM.GSR.TRAN.ZS		
Aruba	ABW	Travel services (% of service imports, BoP)	BM.GSR.TRVL.ZS		
Aruba	ABW	Secondary income, other sectors, payments (BoP, current US\$)	BM.TRF.PRVT.CD		
Aruba	ABW	Current account balance (BoP, current US\$)	BN.CAB.XOKA.CD		
Aruba	ABW	Current account balance (% of GDP)	BN.CAB.XOKA.GD.ZS		
Aruba	ABW	Net financial account (BoP, current US\$)	BN.FIN.TOTL.CD		
Aruba	ABW	Net primary income (BoP, current US\$)	BN.GSR.FCTY.CD		
Aruba	ABW	Net trade in goods and services (BoP, current US\$)	BN.GSR.GNFS.CD		
Aruba	ABW	Net trade in goods (BoP, current US\$)	BN.GSR.MRCH.CD		

localhost (Online)

- MYSQL56 - Running
- Actions

S&P 500 Index + Watchlist

SPX:IND

↑ 2,051.31 +4.63
+0.23%

As of 16:44:57 ET on 07/09/2015.

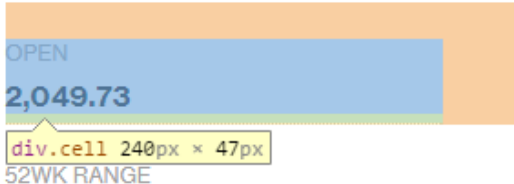


1D | 1M | 1Y | 5Y **Time Frame** Add Comparison Indicators



div.data-table.data-table_detailed | 800 x 134

OPEN	DAY RANGE	PREVIOUS CLOSE
2,173.71	2,161.95 - 2,173.71	2,175.03
52WK RANGE	1 YR RETURN	YTD RETURN
1,810.10 - 2,175.63	6.59%	6.09%



```

<div class="cell">
  <div class="cell_label">
    Open
  </div>
  <div class="cell_value cell_value_">
    2,049.73
  </div>
</div>

```

WHAT WILL THE FUTURE LOOK LIKE?

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Crude Oil & Natural Gas

INDEX	UNITS	PRICE	CHANGE	%CHANGE	CONTRACT	TIME ET	2 DAY
CL1.COM WTI Crude Oil (Nymex)	USD/bbl	50.89	-0.02	-0.04%	AUG 15	17:14:59	
CO1.COM Brent Crude (ICE)	USD/bbl	57.10	+0.18	+0.32%	SEP 15	17:59:58	
CP1.COM Crude Oil (Tokyo)	JPY/kl	44,000.00	+180.00	+0.41%	DEC 15	14:59:12	
NG1.COM Natural Gas (Nymex)	USD/MMBtu	2.87	+0.02	+0.56%	AUG 15	17:14:53	

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Energy & Oil

Crude Oil & Natural Gas

table.data-table 800px x 250px

INDEX	UNITS	PRICE	CHANGE	%CHANGE
CL1.COM	USD/bbl	50.89	-0.02	-0.04%

Elements | Network | Sources | Timeline | Profiles | Resources | Audits | Console

```
<div class="section-front module">
  <div class="section-front_title-box title-box"></div>
  <div class="section-front__brokerbox-ads-container brokerbox-ads-container hidden"></div>
  <div class="section-front__main-content">
    <div class="data-tables" data-view-uid="1|0_1_2">
      <div class="table-container">
        ::before
        <div class="table-container__header"></div>
        <table class="data-table"></table>
      </div>
      ::after
    </div>
  </div>
</div>
```

body div.container main#content.main-content div div.section-front.module div.section-front__main-content div.data-tables div.table-container table.data-table

Chrome 總覽

SelectorGadget
來源網站: selectorgadget.com
★★★★ (23) | 開發人員工具 | 16,922 位使用者

已添加到 CHROME

總覽 評論 支援 相關項目 8+1 12

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Easy, powerful CSS selector generation.

Selector Gadget is an open source Chrome Extension that makes CSS selector generation and discovery on complicated sites a breeze.

After having installed the extension, go to any page and launch it. A box will open in the bottom right of the website. Click on a page element that you would like your selector to match (it will turn green). SelectorGadget will then generate a minimal CSS selector for that element, and will highlight (yellow) everything that is matched by the selector. Now click

網站 檢查適用情形
版本: 1.1
更新日期: 2015年3月20日
大小: 79.7KB
語言: English

OneTab x http:// x pipeline x Facebook x Gramms x Next Sy x In addit x thereaf x In addit x Chromo x 3 SPX Qu x

www.bloomberg.com/quote/SPX:IND

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As of 16:34:06 ET on 07/14/2015.

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START YOUR FREE TRIAL TODAY

OPEN	DAY RANGE	PREVIOUS CLOSE
2,099.72	2,098.18 - 2,111.98	2,099.60
52WK RANGE	1 YR RETURN	YTD RETURN
1,820.66 - 2,134.72	9.07%	3.55%

.data-table_detailed Clear (1) Toggle Position XPath ? X

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Downloads

Below is where you can find the latest releases of all the Selenium components. You can also find a list of [previous releases](#), [source code](#), and additional information for [Maven users](#) (Maven is a popular Java build tool).

Selenium Standalone Server

The Selenium Server is needed in order to run either Selenium RC style scripts or Remote Selenium WebDriver ones. The 2.x server is a drop-in replacement for the old Selenium RC server and is designed to be backwards compatible with your existing infrastructure.

Download version [2.46.0](#)

To use the Selenium Server in a Grid configuration [see the wiki page](#).

The Internet Explorer Driver Server

This is required if you want to make use of the latest and greatest features of the WebDriver InternetExplorerDriver. Please make sure that this is available on your \$PATH (or %PATH% on Windows) in order for the IE Driver to work as expected.

Download version 2.46.0 for (recommended) [32 bit Windows IE](#) or [64 bit Windows IE](#)
[CHANGELOG](#)

Selenium Client & WebDriver Language Bindings

In order to create scripts that interact with the Selenium Server (Selenium RC, Selenium Remote WebDriver) or create local Selenium WebDriver script you need to make use of language-specific client drivers. These languages include both 1.x and 2.x style clients.

While language bindings for [other languages exist](#), these are the core ones that are supported by the main project hosted on google code.

Client Version Release Date

```
C:\Users\dauid\Downloads>java -jar selenium-server-standalone-2.46.0.jar
13:12:45.342 INFO - Launching a standalone Selenium Server
13:12:47.069 INFO - Java: Oracle Corporation 25.45-b02
13:12:47.069 INFO - OS: Windows 7 6.1 amd64
13:12:47.204 INFO - v2.46.0, with Core v2.46.0. Built from revision 87c69e2
13:12:47.338 INFO - Driver class not found: com.opera.core.systems.OperaDriver
13:12:47.339 INFO - Driver provider com.opera.core.systems.OperaDriver is not registered
13:12:49.520 INFO - RemoteWebDriver instances should connect to: http://127.0.0.1:4444/wd/hub
13:12:49.521 INFO - Selenium Server is up and running
```



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Account Creation in two taps



Sharing on Facebook
Promote your app or website organically



Facebook Analytics for Apps
Understand how people use your app



Mobile Monetization
Monetize your mobile app or mobile website with ads



Messenger Platform
Build your bot to reach 900 million people

Go to Platform Bugs

Support

- [Parse Help](#)
- [Facebook Developers Group](#)
- [Payments Support Center](#)
- [Facebook Marketing Partners](#)
- [Facebook Help Center](#)

Tools

Test and debug your app.

[Graph API Explorer](#)

Test, create, and authenticate API calls and debug responses.

[Sharing Debugger](#)

Preview how your content will look when it's shared to Facebook and debug any issues with your Open Graph tags.

[Object Browser](#)

Create and edit Open Graph objects for your apps.

[Comments Moderation Tool](#)

Manage comments on your Page and website and control settings for the comments plugin.

[Access Token Tool](#)

Generate user and app access tokens for testing.

[Lead Ads RTU Debug Tool](#)

Make sure your API or CRM integration is set up correctly and receiving data.

[API Upgrade Tool](#)

See which API calls are affected by changes in newer versions of the API and learn what changes you need to make to upgrade.

[Analytics for Apps](#)

Understand your audience and the performance of your app.

Graph API Explorer

Application: [?] Graph API Explorer Locale: [?] English (US) API Version: [?] v2.4

Access Token: CAACEdEose0cBAAmXVJrVrOj0tZA3seiCLWY1yKI3yWJpKFkTWTMni4srmB5Hmu2pDqZBW03EKQDS

Debug

- Get Tok...
- Get Access Token
- Get App Token
- Get Page Token

Graph API FQL Query

GET

→ /v2.4/me?fields=id,name

Debug Enabled

Learn more about the

Select Permissions

v2.7



User Data Permissions

- | | | |
|-------------------------------------------------|----------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> email | <input type="checkbox"/> user_hometown | <input type="checkbox"/> user_religion_politics |
| <input type="checkbox"/> publish_actions | <input type="checkbox"/> user_likes | <input type="checkbox"/> user_status |
| <input type="checkbox"/> user_about_me | <input type="checkbox"/> user_location | <input checked="" type="checkbox"/> user_tagged_places |
| <input type="checkbox"/> user_birthday | <input type="checkbox"/> user_photos | <input type="checkbox"/> user_videos |
| <input type="checkbox"/> user_education_history | <input type="checkbox"/> user_posts | <input type="checkbox"/> user_website |
| <input type="checkbox"/> user_friends | <input type="checkbox"/> user_relationship_details | <input type="checkbox"/> user_work_history |
| <input type="checkbox"/> user_games_activity | <input type="checkbox"/> user_relationships | |

Events, Groups & Pages

- | | | |
|----------------------------------------------|--------------------------------------------------------|----------------------------------------------|
| <input type="checkbox"/> ads_management | <input type="checkbox"/> pages_manage_instant_articles | <input type="checkbox"/> read_page_mailboxes |
| <input type="checkbox"/> ads_read | <input type="checkbox"/> pages_messaging | <input type="checkbox"/> rsvp_event |
| <input type="checkbox"/> business_management | <input type="checkbox"/> pages_messaging_phone_number | <input type="checkbox"/> user_events |
| <input type="checkbox"/> manage_pages | <input type="checkbox"/> pages_show_list | <input type="checkbox"/> user_managed_groups |
| <input type="checkbox"/> pages_manage_cta | <input type="checkbox"/> publish_pages | |

Open Graph Actions

- | | | |
|-----------------------------------------------|---------------------------------------------|---------------------------------------------|
| <input type="checkbox"/> user_actions.books | <input type="checkbox"/> user_actions.music | <input type="checkbox"/> user_actions.video |
| <input type="checkbox"/> user_actions.fitness | <input type="checkbox"/> user_actions.news | |

Other

- | | | |
|---------------------------------------------------------|--------------------------------------------------|----------------------------------------|
| <input type="checkbox"/> read_audience_network_insights | <input type="checkbox"/> read_custom_friendlists | <input type="checkbox"/> read_insights |
|---------------------------------------------------------|--------------------------------------------------|----------------------------------------|

Public profile included by default

Get Access Token

Clear

取消

Graph API Explorer

Application: [?] Graph API Explorer

Locale: [?] 中文(台湾)

API Version: [?] v2.4

Access Token: CAACEdEose0cBABYFAt0kfQ6ZBa54uZB3aS5ks5MFSabc9l6wFuvrAAhRKDBjZARJLHgZCmmv7XtYglij

Debug

⇌ Get Tok... ▾

Graph API FQL Query

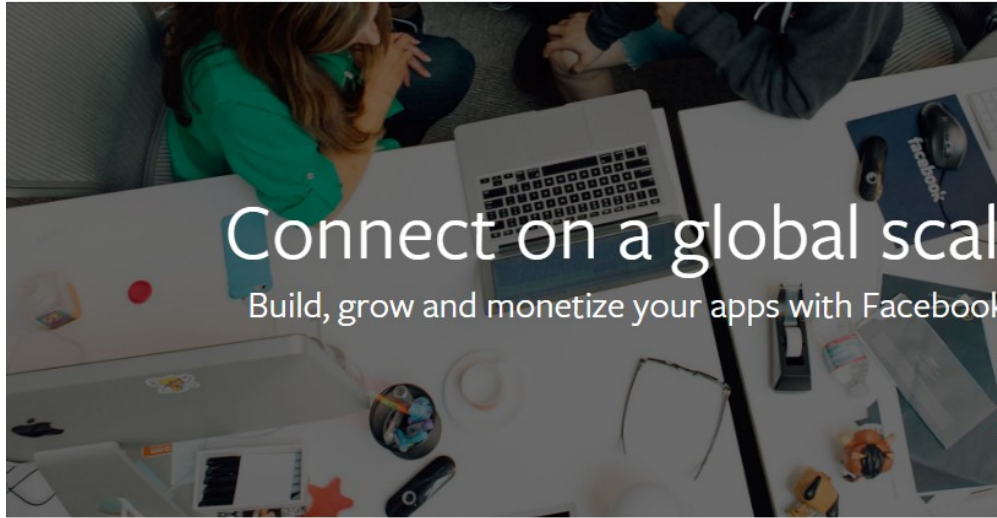
GET ▾

→ /v2.4/me?fields=id,name

Debug Enabled ▾

▶ Submit

[Learn more about the Graph API syntax](#)



- rcookbooktest3
- Voyage
- sysagecrawler1
- sysageyearend
- twmtm
- sysage1012
- hellochuchu
- Voyagesocialauth
- Gift Project
- DSPCourse

See All Apps
Add a New App

- Requests
- Developer Settings
- Company Settings
- Log Out of Facebook

Create a New App ID ✕

Create **rcookbooktest** App?

No Is this a test version of another app? [Learn More.](#)

Contact Email

Category

By proceeding, you agree to the Facebook Platform Policies

Dashboard



rcookbooktest ○

This app is in development mode and can only be used by app admins, developers and testers [?]

API Version [?]

App ID

v2.7

1831451070409987

App Secret

••••••••

Show

 Application Management



Twitter Apps

Create New App



dev-ywchiu
dev-ywchiu

 Application Management



Create an application

Application Details

Name *

testaccess

Your application name. This is used to attribute the source of a tweet and in user-facing authorization screens. 32 characters max.

Description *

testaccess

Your application description, which will be shown in user-facing authorization screens. Between 10 and 200 characters max.

Website *

http://largitdata.com

Your application's publicly accessible home page, where users can go to download, make use of, or find out more information about your application. This fully-qualified URL is used in the source attribution for tweets created by your application and will be shown in user-facing authorization screens.

(If you don't have a URL yet, just put a placeholder here but remember to change it later.)

[Details](#)[Settings](#)[Keys and Access Tokens](#)[Permissions](#)

Application Settings

Keep the "Consumer Secret" a secret. This key should never be human-readable in your application.

Consumer Key (API Key)	CYwz8vsCBbRWxL5UmsiK3QaPX
Consumer Secret (API Secret)	38sSwUIVxQr1I4ezDozUp7Mh9LkMQqwoN0bfhFitHdM5yoUHQR

Your Access Token

This access token can be used to make API requests on your own account's behalf. Do not share your access token secret with anyone.

Access Token	1420010924-OZFds1T3L7H20mouccVrbev10yw1pGxMSuylezF
Access Token Secret	lEcqRG9Y4eonCHsWMRwHWMXmXwj0QES9pKeE9dx6H3l
Access Level	Read-only
Owner	tr_ywchiu
Owner ID	1420010924

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Search



English

Exploring the Twitter API

Service: Authentication:

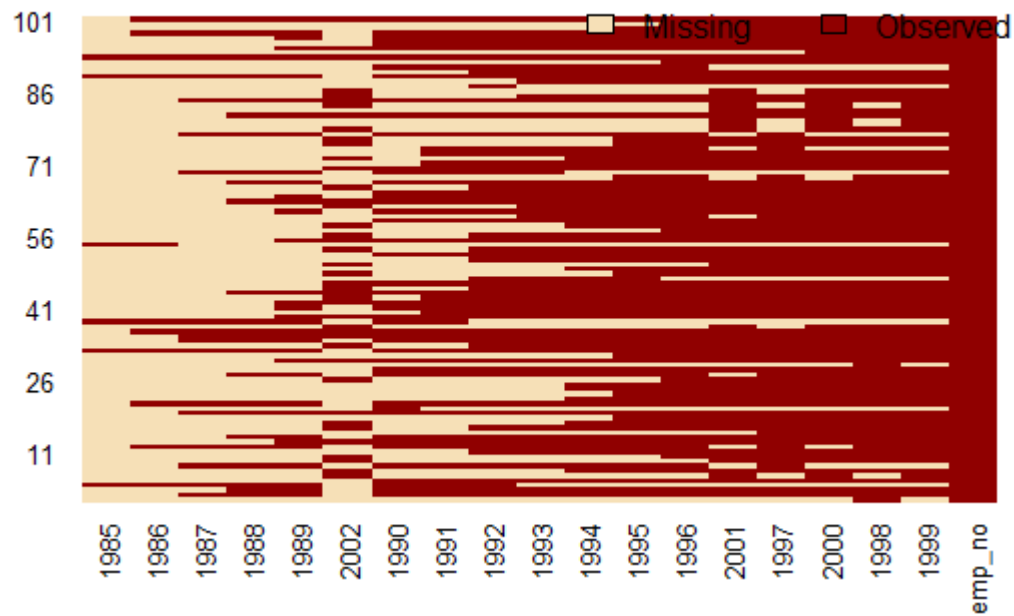
Request URL:

Query*

Request	Response
<pre>GET /1.1/search/tweets.json?q=World%20Cup HTTP/1.1 Authorization: OAuth oauth_consumer_key="DC0sePOBbQ8bydc8r4Smg",oauth_signature="SHA1",oauth_timestamp="1437368428",oauth_nonce="2127030953775VTgvv7zywqZxquEY1mVPYS1sttCi3AXnP",oauth_signature="Host: api.twitter.com X-Target-URI: https://api.twitter.com Connection: Keep-Alive</pre>	<pre>HTTP/1.1 200 OK x-frame-options: SAMEORIGIN content-type: application/json; charset=utf-8 x-rate-limit-remaining: 179 last-modified: Mon, 20 Jul 2015 05:00:28 GMT status: 200 OK x-response-time: 93 date: Mon, 20 Jul 2015 05:00:28 GMT Connection: keep-alive x-transaction: 1c105ca1179a4db9 pragma: no-cache cache-control: no-cache, no-store, must-revalidate, pre-check=0, post-check=0</pre>

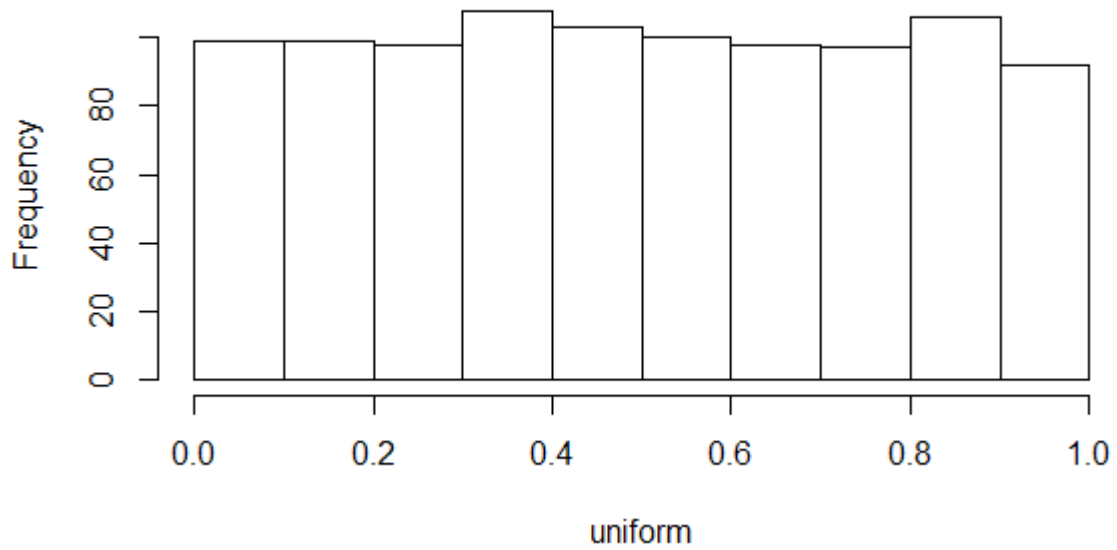
Chapter 3: Data Preprocessing and Preparation

Missing Map

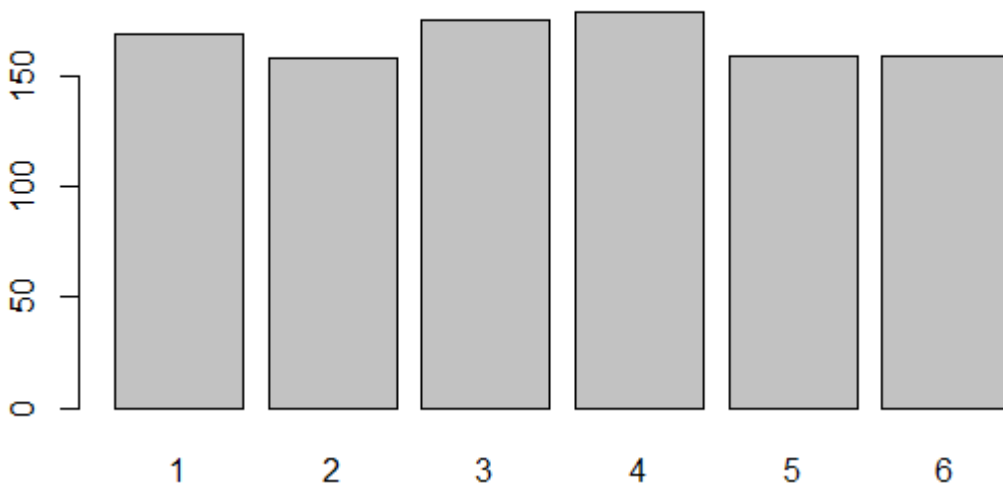


Chapter 4: Data Manipulation

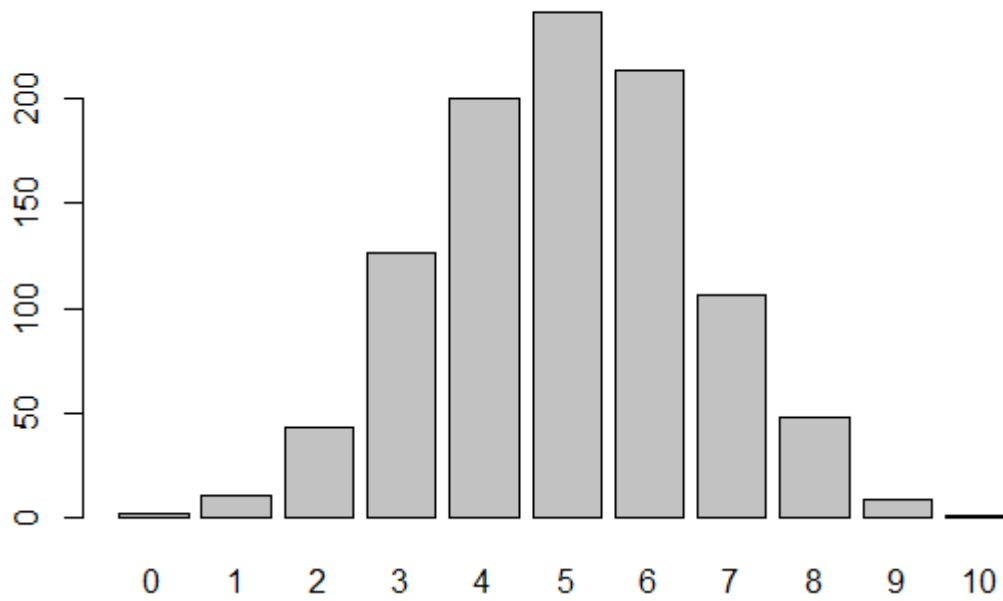
1,000 random variates from a uniform distribution



Frequency of each side



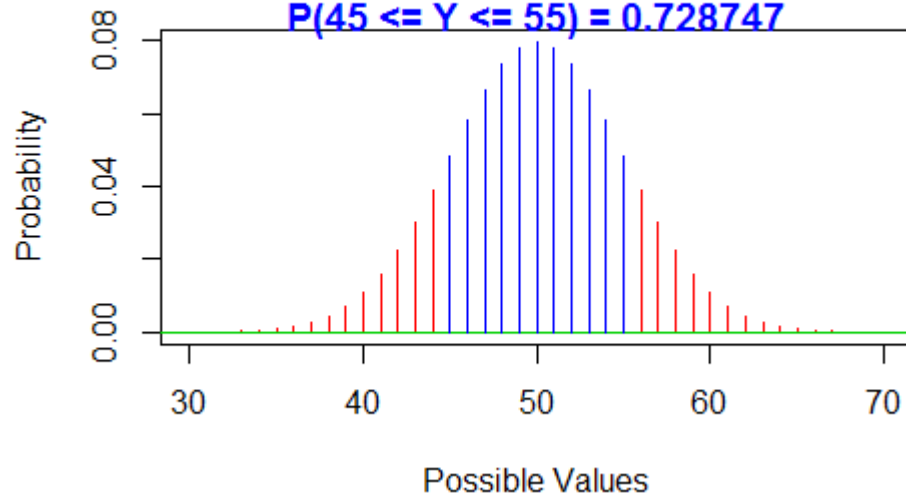
A simulation of 1,000 people tossing a coin 10 times



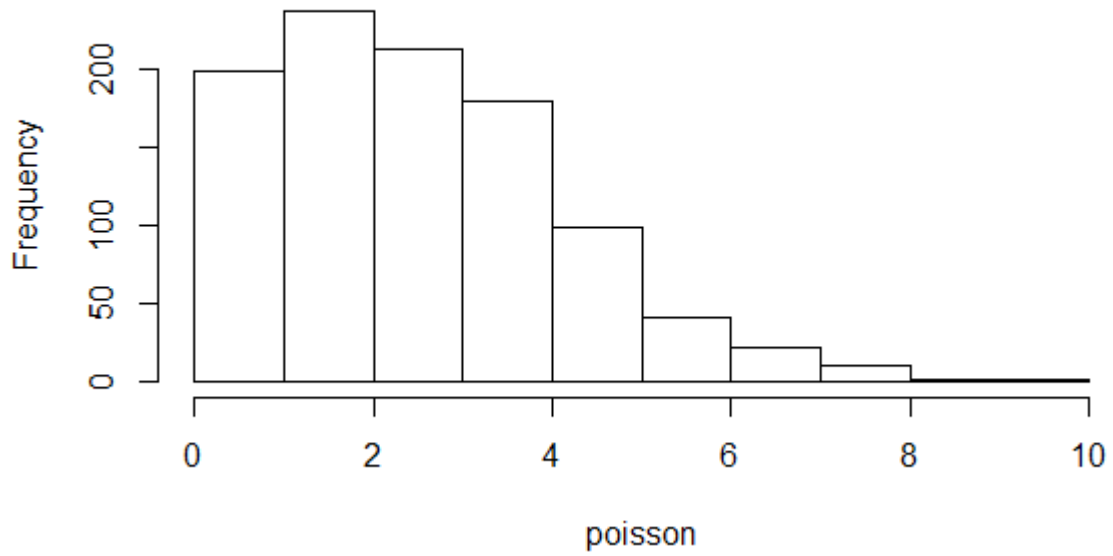
Binomial Distribution

$n = 100, p = 0.5$

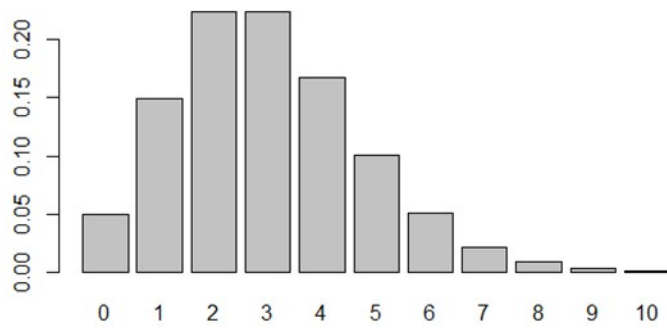
$P(45 \leq Y \leq 55) = 0.728747$



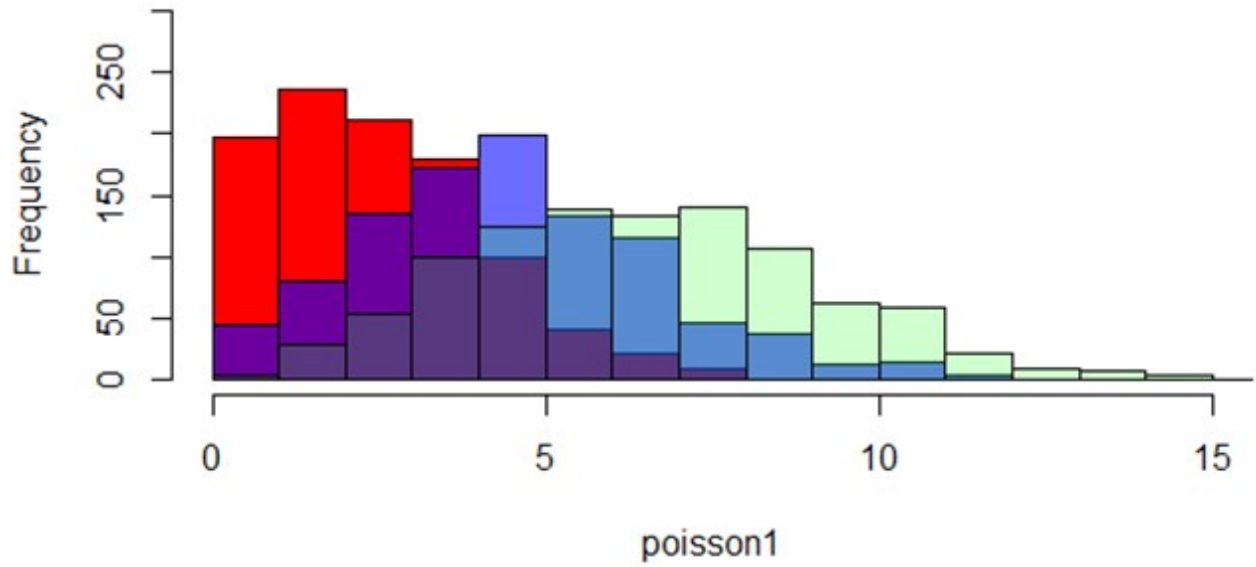
A histogram of a Poisson distribution



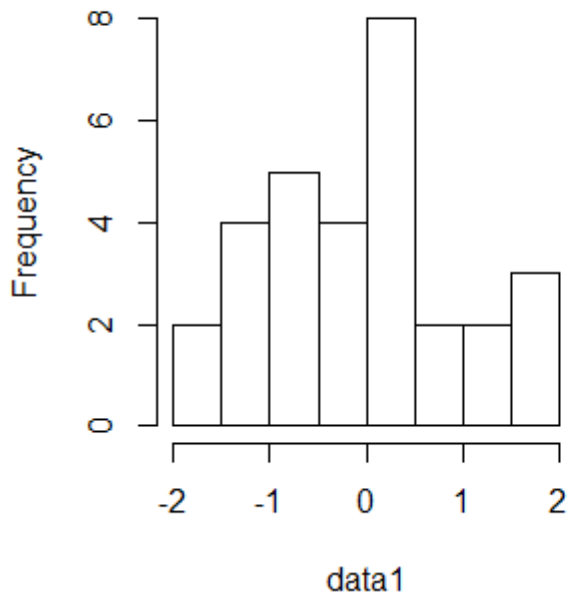
A barplot of a Poisson distribution



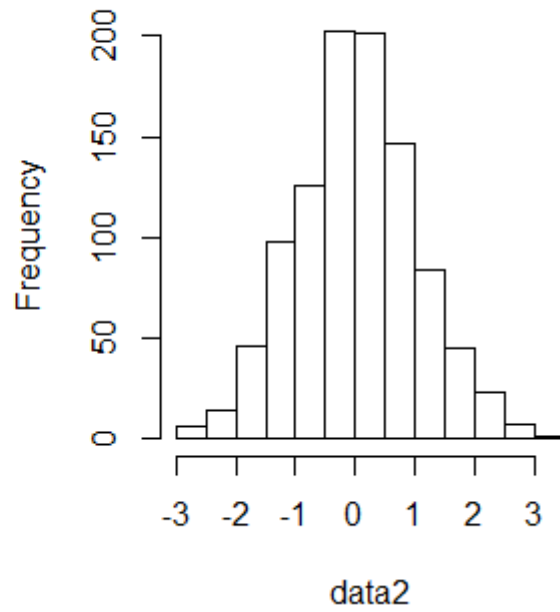
Histograms with different lambda



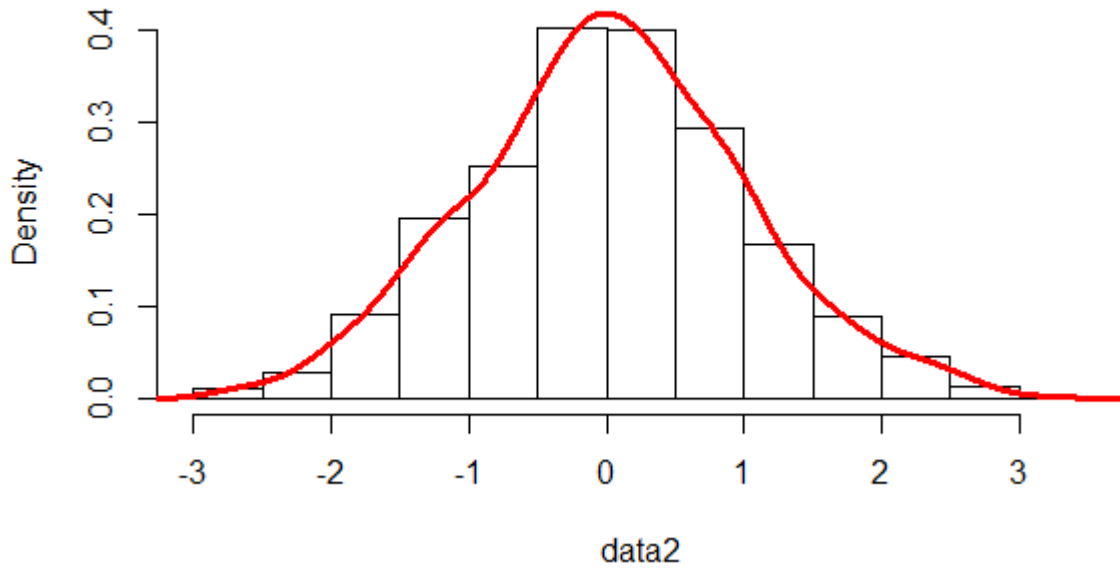
30 samples



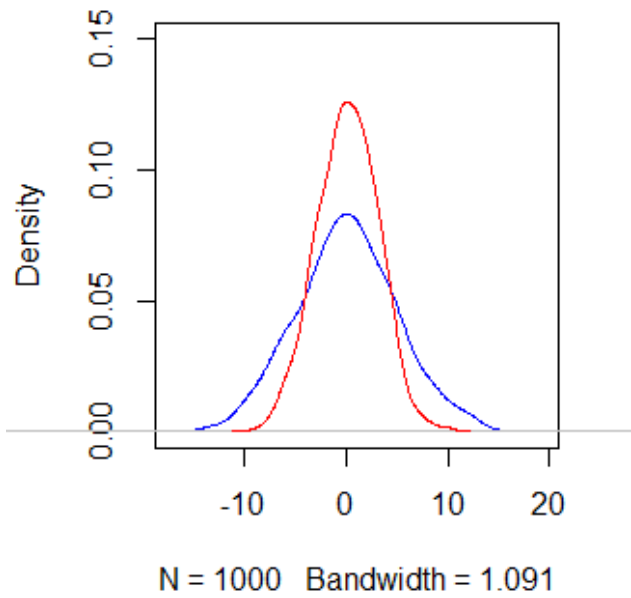
1000 samples



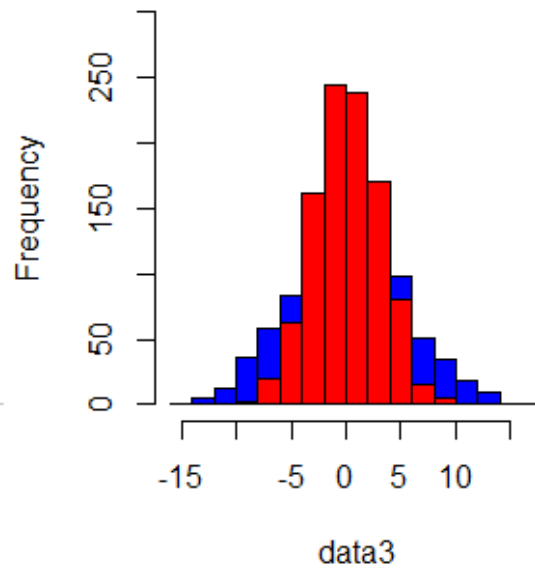
Density curve over histogram



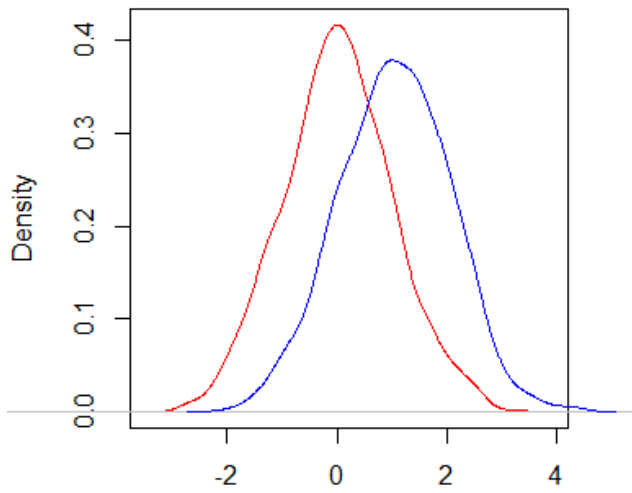
Density Plot Under Different sd



Histogram Under Different sd

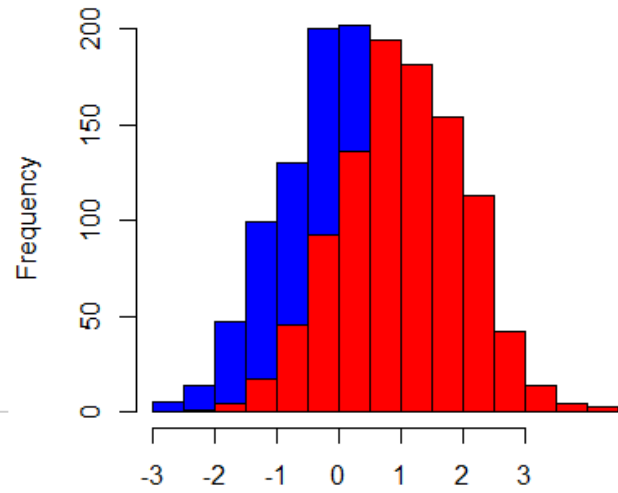


Density Plot Under Different Mean



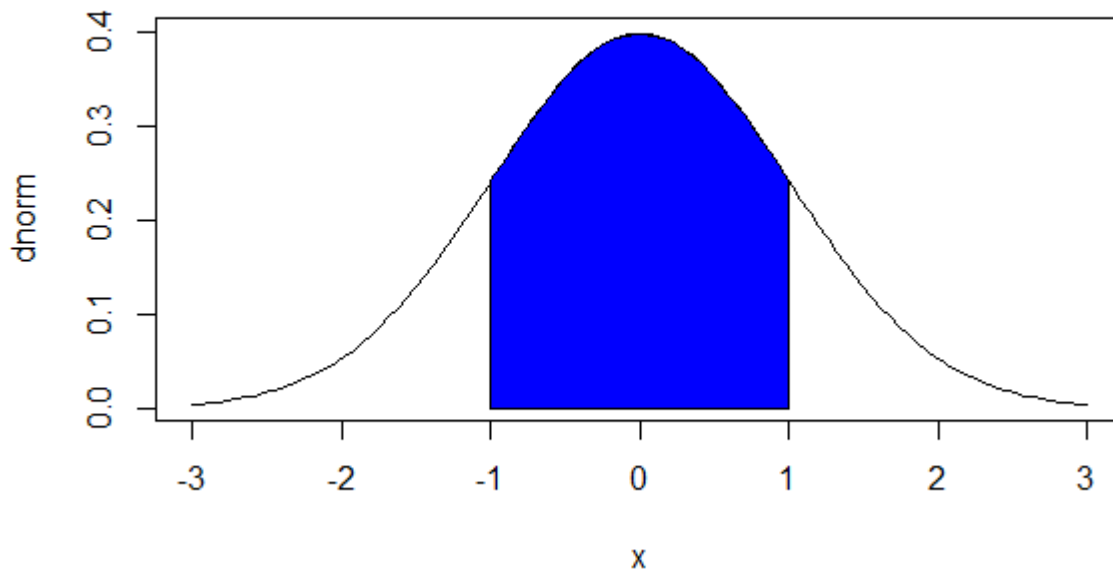
N = 1000 Bandwidth = 0.2181

Histogram Under Different Mean

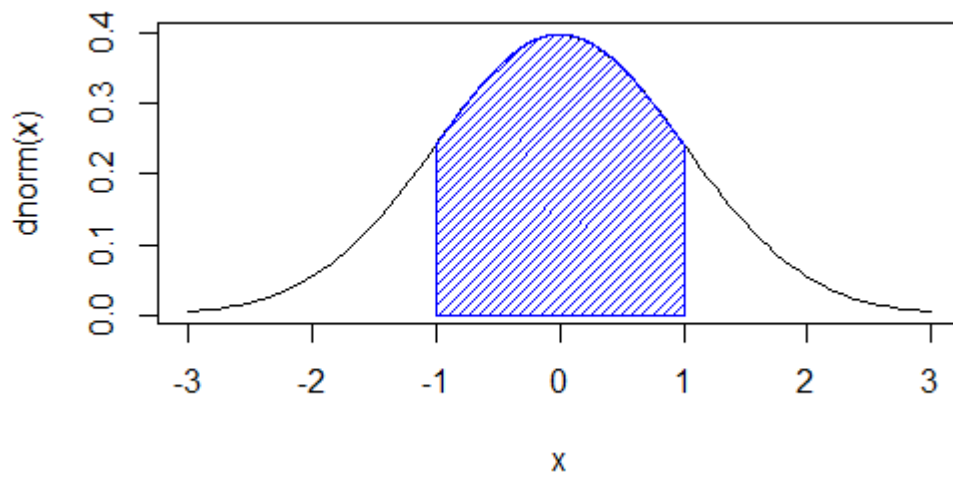
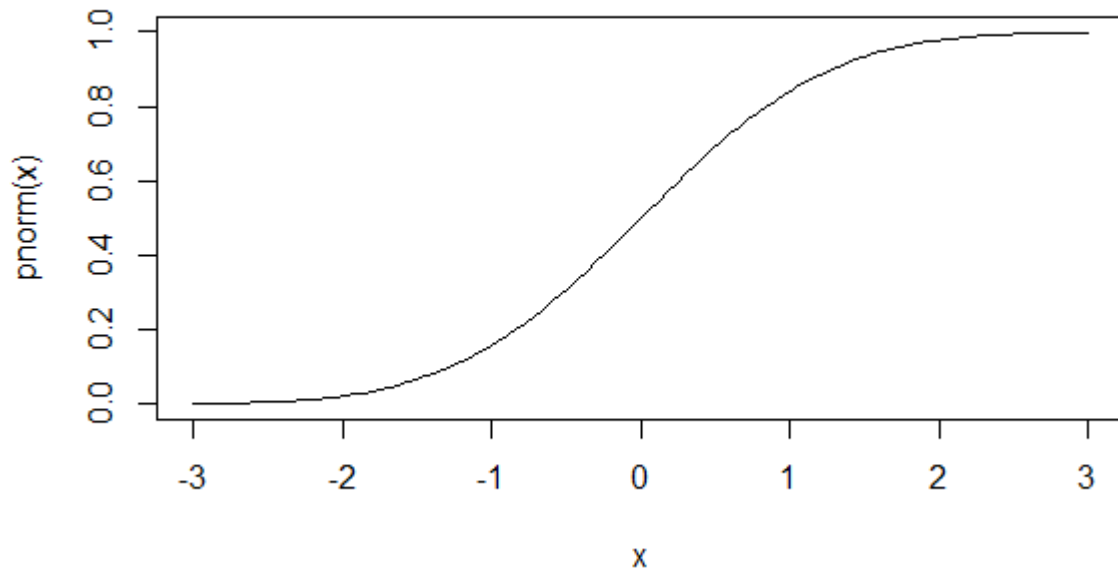


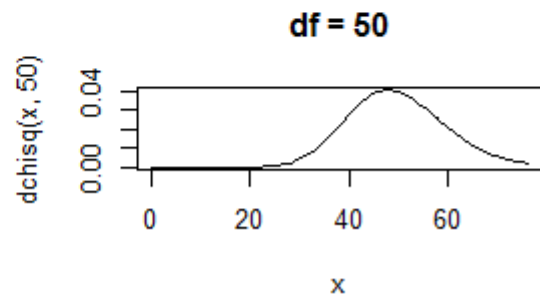
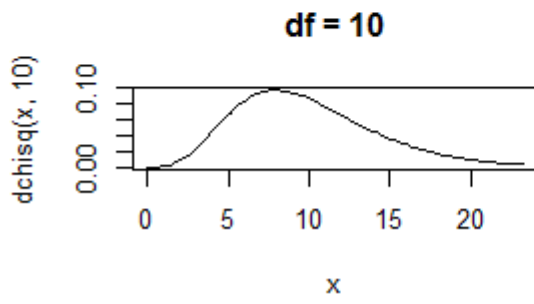
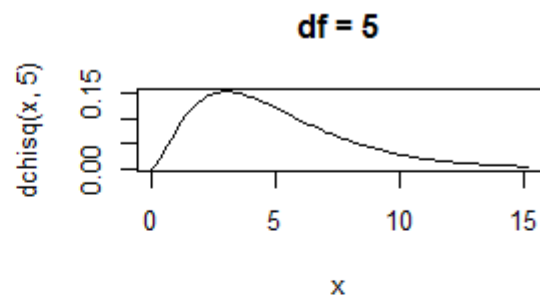
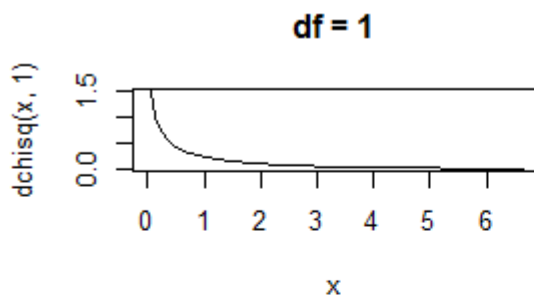
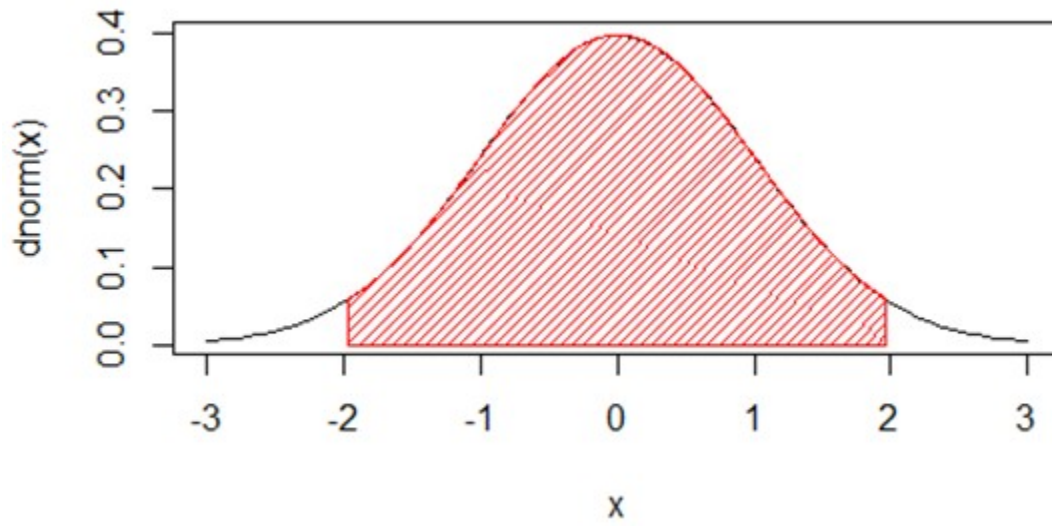
data5

A normal distribution generated from dnorm function

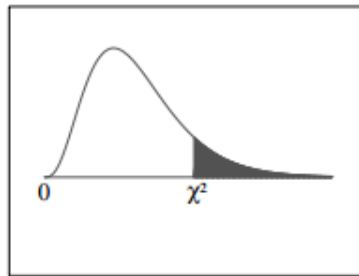


Cumulative distribution function





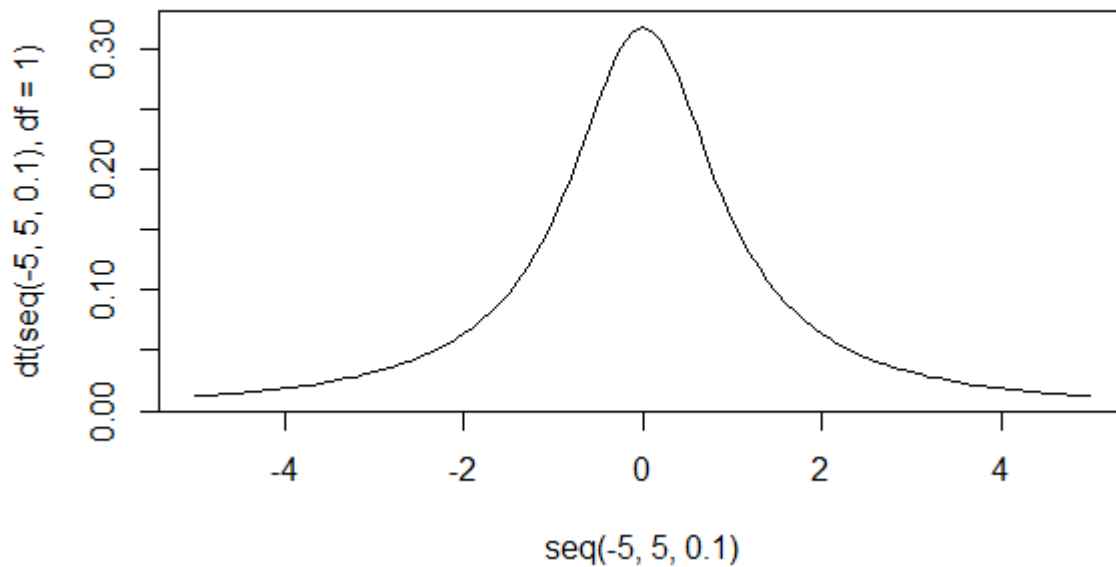
Chi-Square Distribution Table



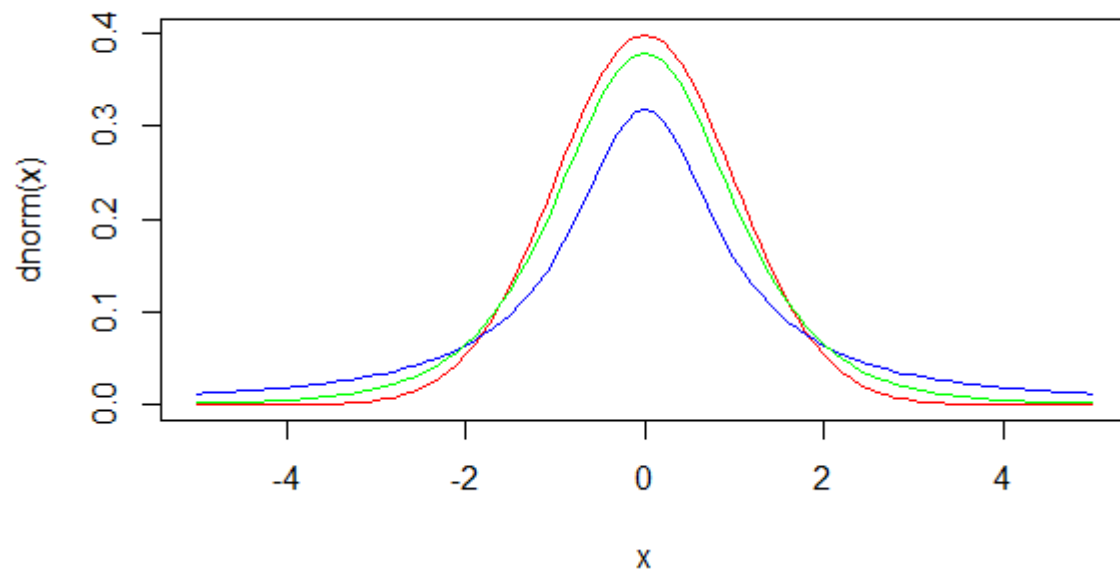
The shaded area is equal to α for $\chi^2 = \chi^2_{\alpha}$.

<i>df</i>	$\chi^2_{.995}$	$\chi^2_{.990}$	$\chi^2_{.975}$	$\chi^2_{.950}$	$\chi^2_{.900}$	$\chi^2_{.100}$	$\chi^2_{.050}$	$\chi^2_{.025}$	$\chi^2_{.010}$	$\chi^2_{.005}$
1	0.000	0.000	0.001	0.004	0.016	2.706	3.841	5.024	6.635	7.879
2	0.010	0.020	0.051	0.103	0.211	4.605	5.991	7.378	9.210	10.597
3	0.072	0.115	0.216	0.352	0.584	6.251	7.815	9.348	11.345	12.838
4	0.207	0.297	0.484	0.711	1.064	7.779	9.488	11.143	13.277	14.860
5	0.412	0.554	0.831	1.145	1.610	9.236	11.070	12.833	15.086	16.750
6	0.676	0.872	1.237	1.635	2.204	10.645	12.592	14.449	16.812	18.548
7	0.989	1.239	1.690	2.167	2.833	12.017	14.067	16.013	18.475	20.278
8	1.344	1.646	2.180	2.733	3.490	13.362	15.507	17.535	20.090	21.955
9	1.735	2.088	2.700	3.325	4.168	14.684	16.919	19.023	21.666	23.589
10	2.156	2.558	3.247	3.940	4.865	15.987	18.307	20.483	23.209	25.188

Student's t-distribution of *df* = 1



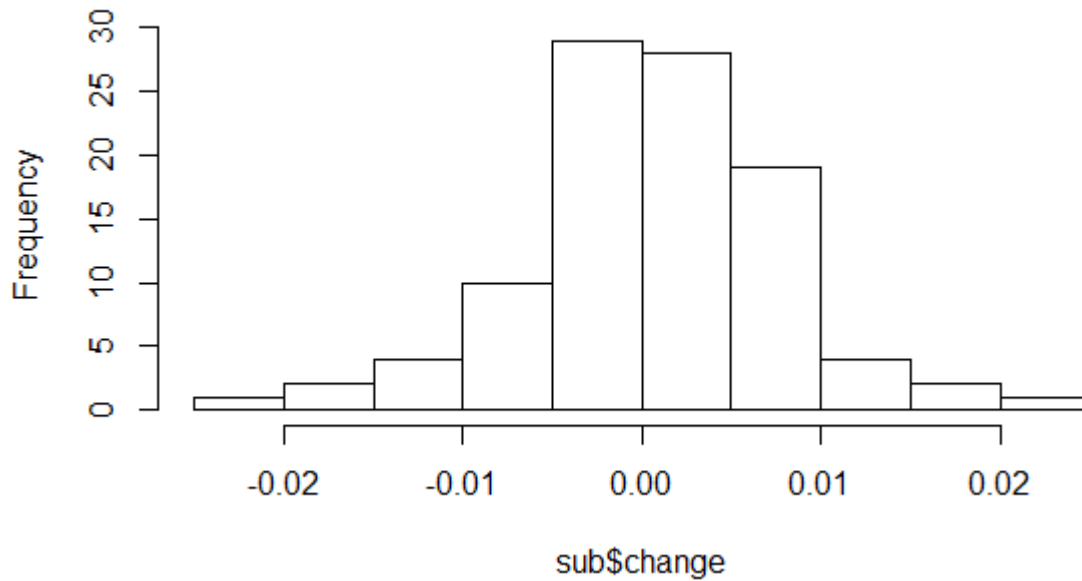
Student's t-distribution under different df



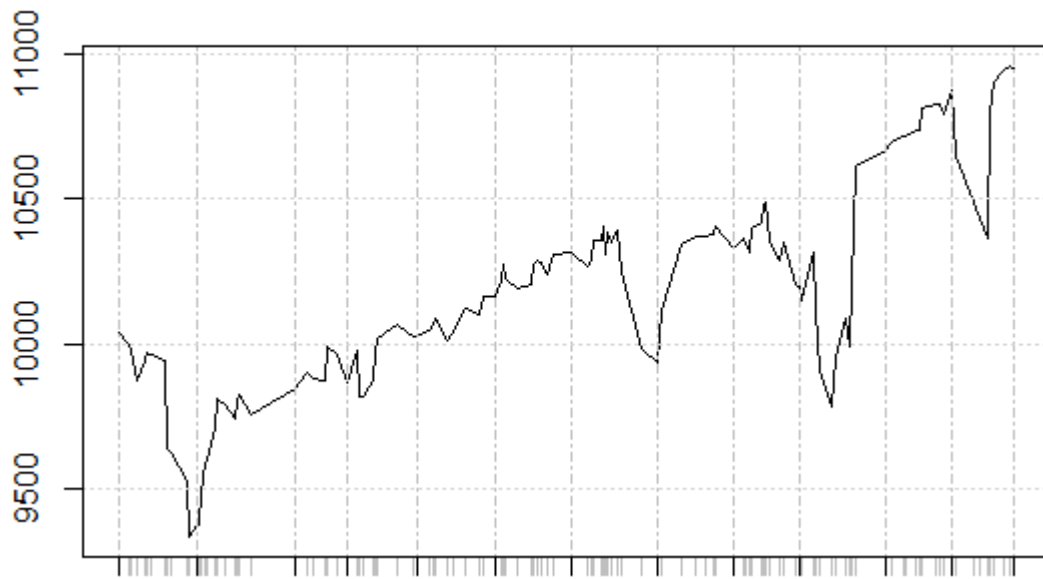
t Table

cum. prob	$t_{.50}$	$t_{.75}$	$t_{.80}$	$t_{.85}$	$t_{.90}$	$t_{.95}$	$t_{.975}$	$t_{.99}$	$t_{.995}$	$t_{.999}$	$t_{.9995}$
one-tail	0.50	0.25	0.20	0.15	0.10	0.05	0.025	0.01	0.005	0.001	0.0005
two-tails	1.00	0.50	0.40	0.30	0.20	0.10	0.05	0.02	0.01	0.002	0.001
df											
1	0.000	1.000	1.376	1.963	3.078	6.314	12.71	31.82	63.66	318.31	636.62
2	0.000	0.816	1.061	1.386	1.886	2.920	4.303	6.965	9.925	22.327	31.599
3	0.000	0.765	0.978	1.250	1.638	2.353	3.182	4.541	5.841	10.215	12.924
4	0.000	0.741	0.941	1.190	1.533	2.132	2.776	3.747	4.604	7.173	8.610
5	0.000	0.727	0.920	1.156	1.476	2.015	2.571	3.365	4.032	5.893	6.869
6	0.000	0.718	0.906	1.134	1.440	1.943	2.447	3.143	3.707	5.208	5.959
7	0.000	0.711	0.896	1.119	1.415	1.895	2.365	2.998	3.499	4.785	5.408
8	0.000	0.706	0.889	1.108	1.397	1.860	2.306	2.896	3.355	4.501	5.041
9	0.000	0.703	0.883	1.100	1.383	1.833	2.262	2.821	3.250	4.297	4.781
10	0.000	0.700	0.879	1.093	1.372	1.812	2.228	2.764	3.169	4.144	4.587

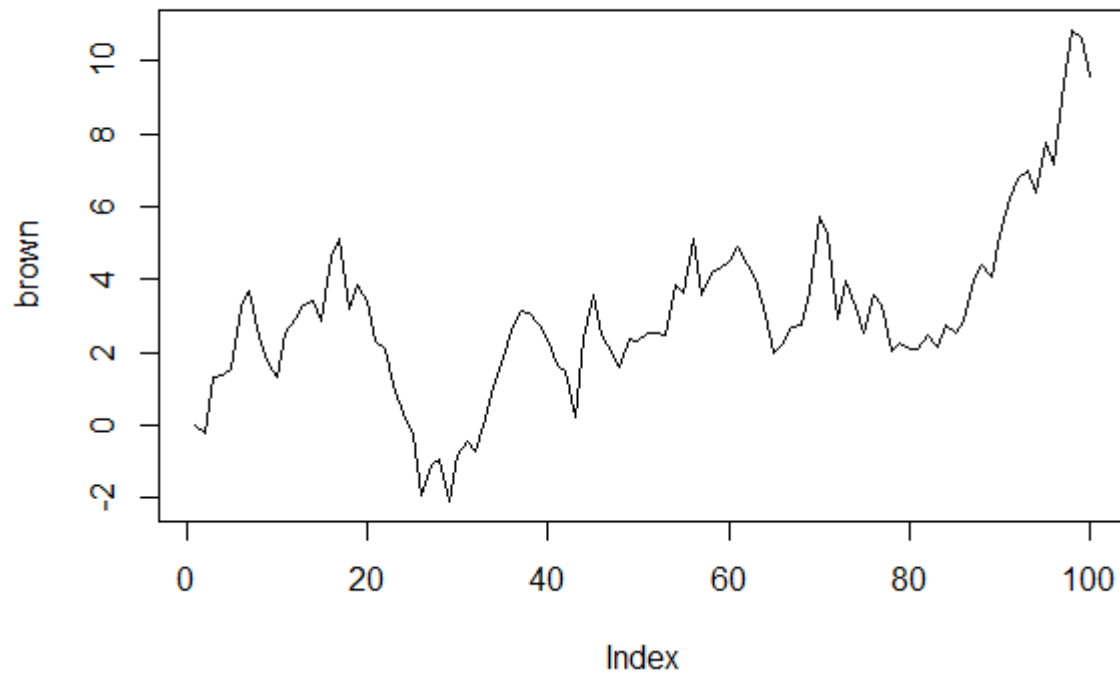
Histogram of daily price change



Returns on random trading

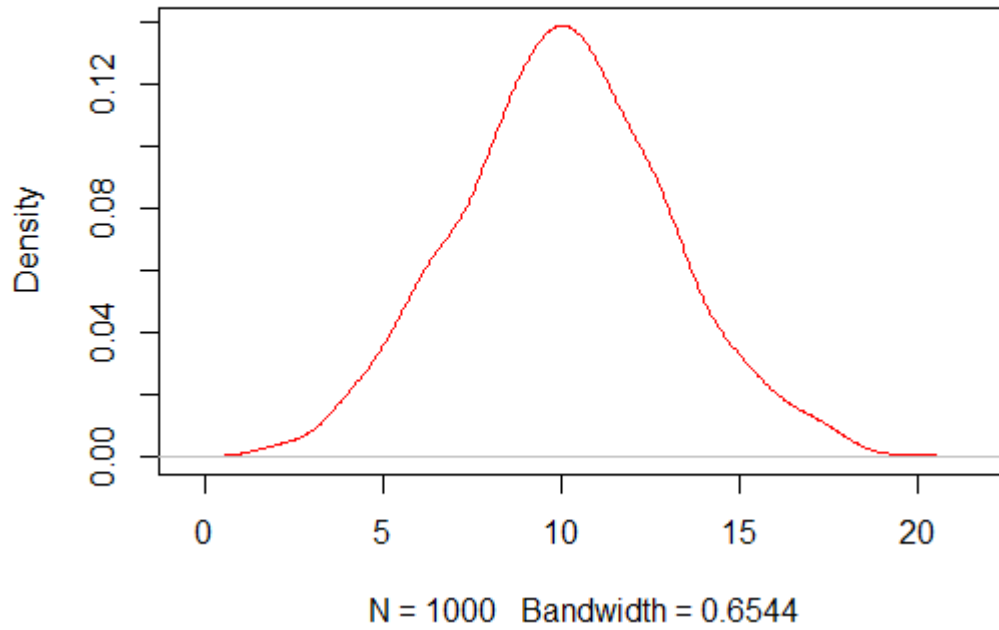


Brownian motion

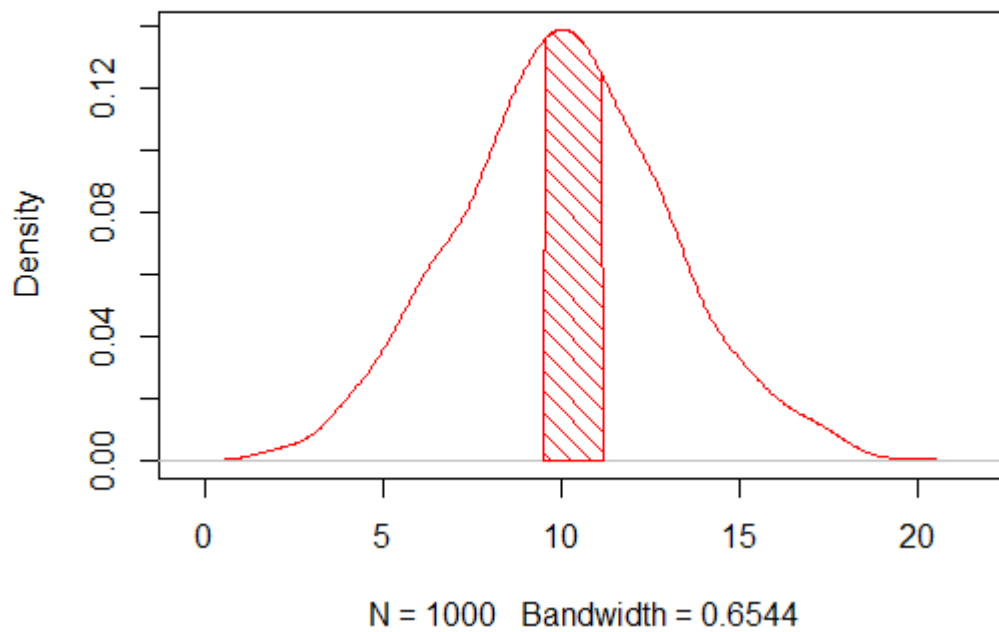


Chapter 5: Visualizing Data with ggplot2

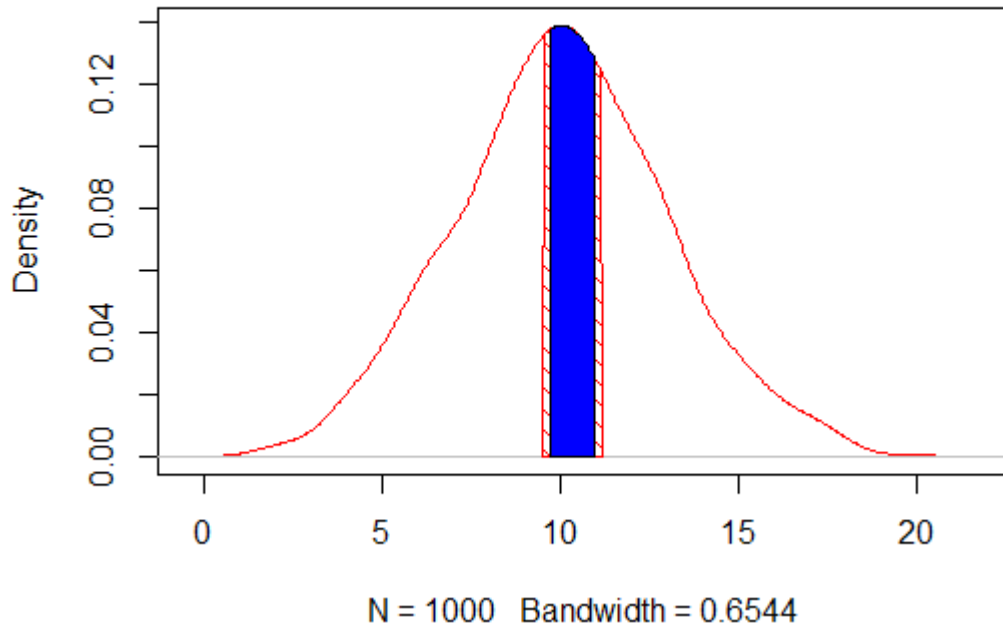
density.default(x = population)



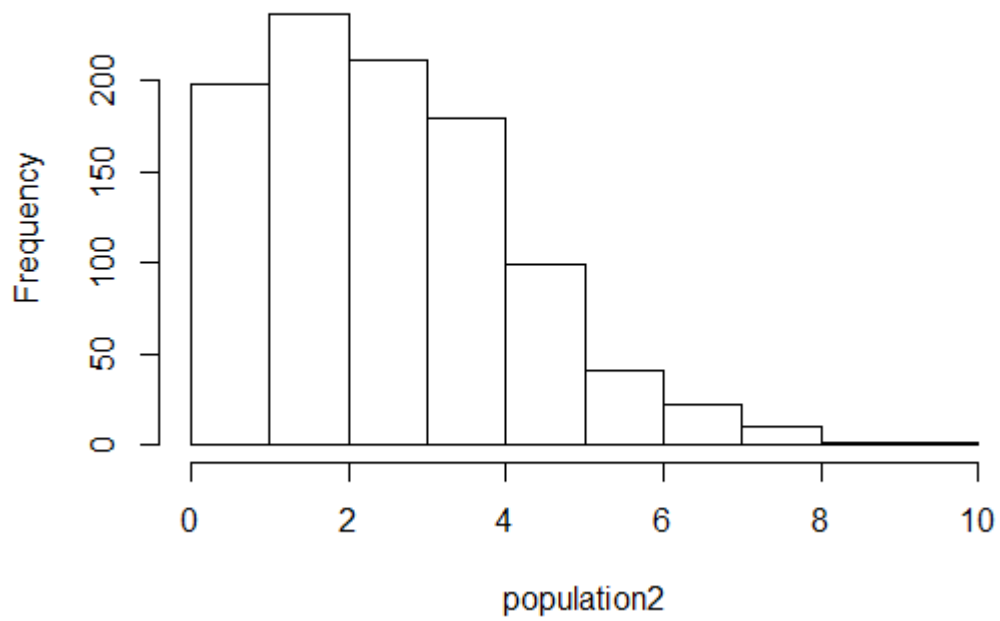
density.default(x = population)

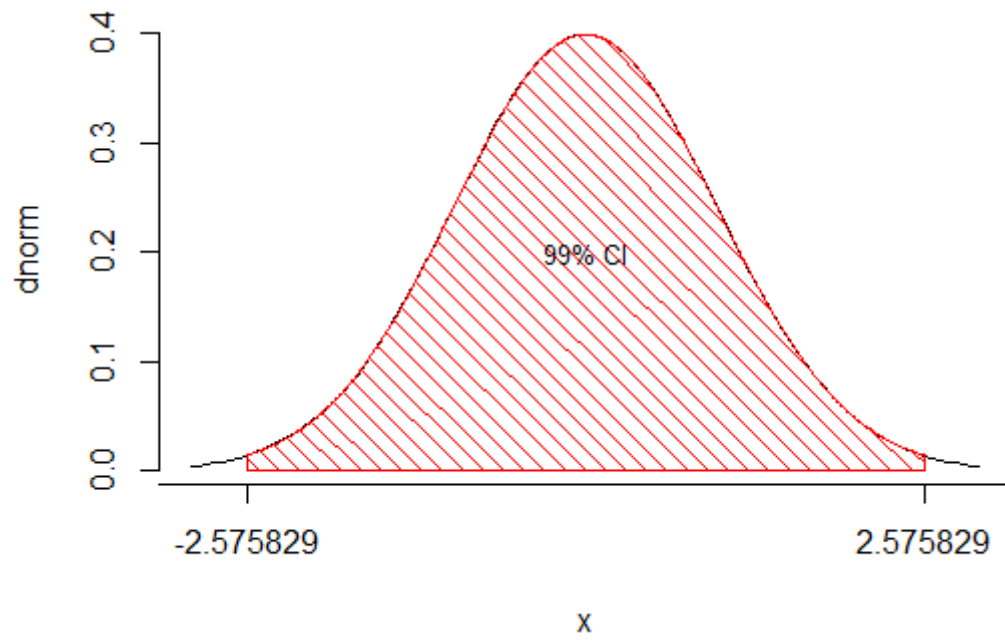


density.default(x = population)

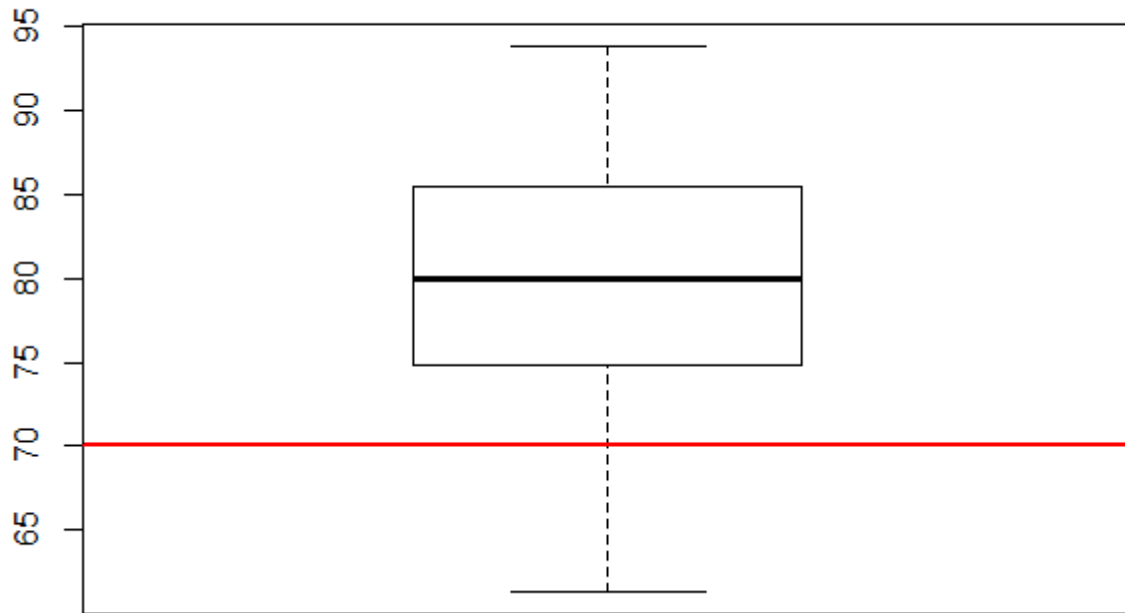


Histogram of population2

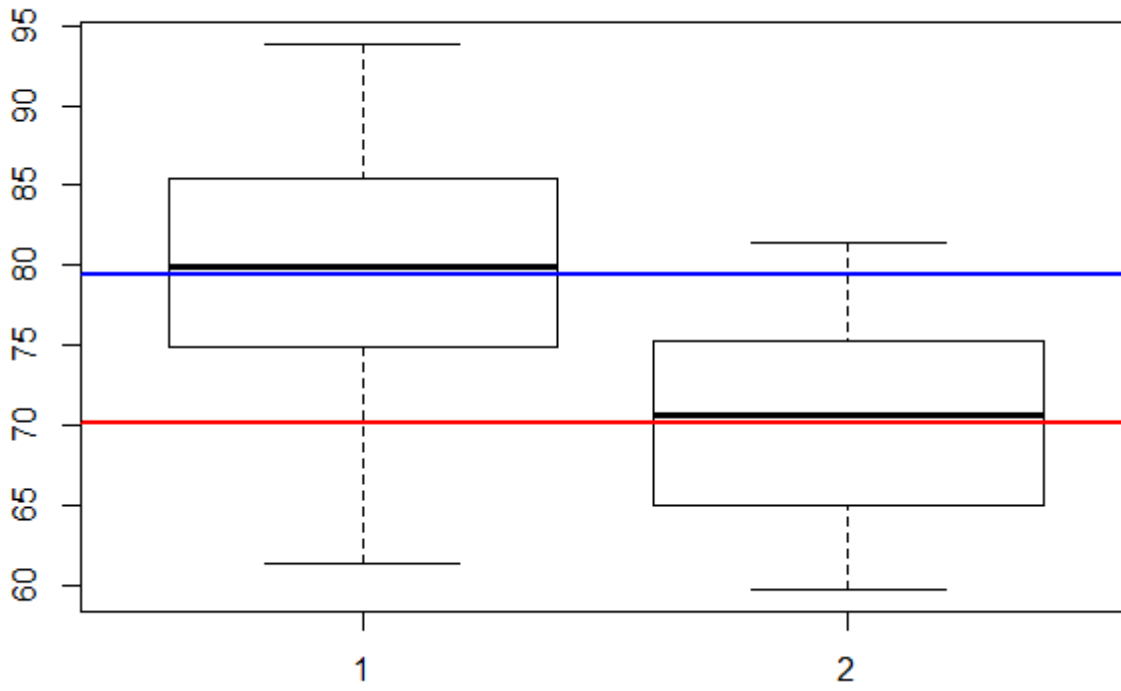




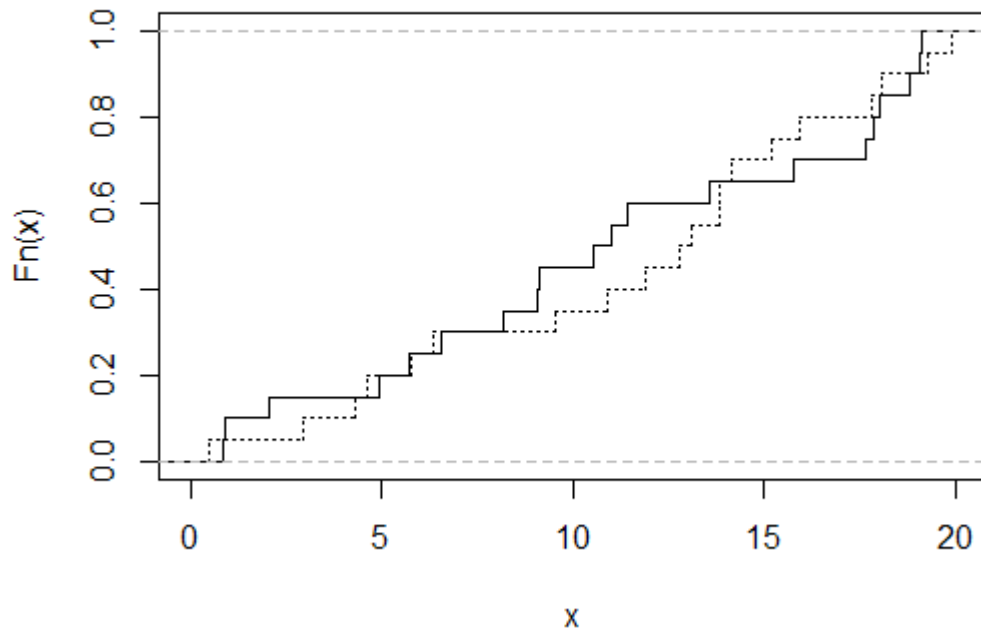
A boxplot of weight



A boxplot of two weight samples



ecdf(x)

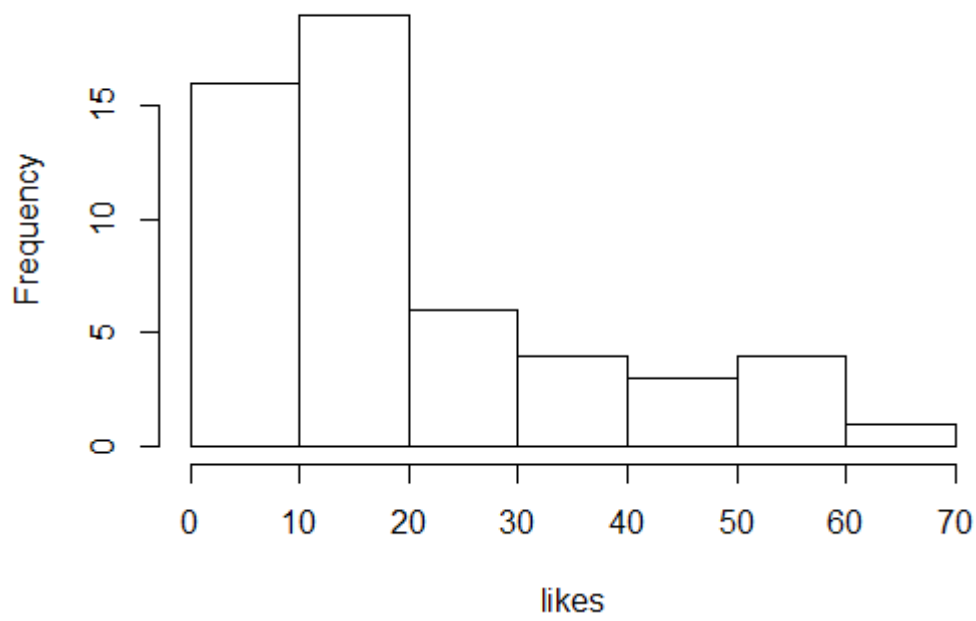


Portion of male and female smokers/non-smokers

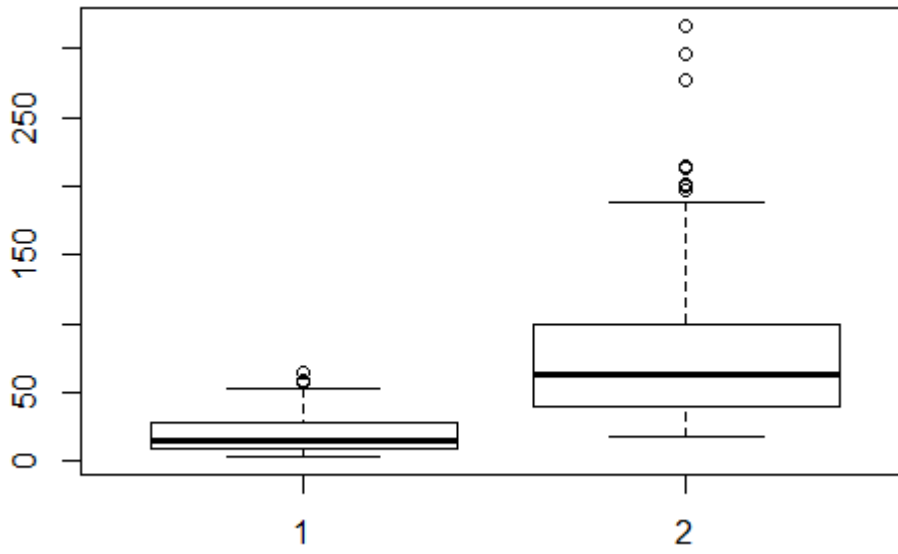
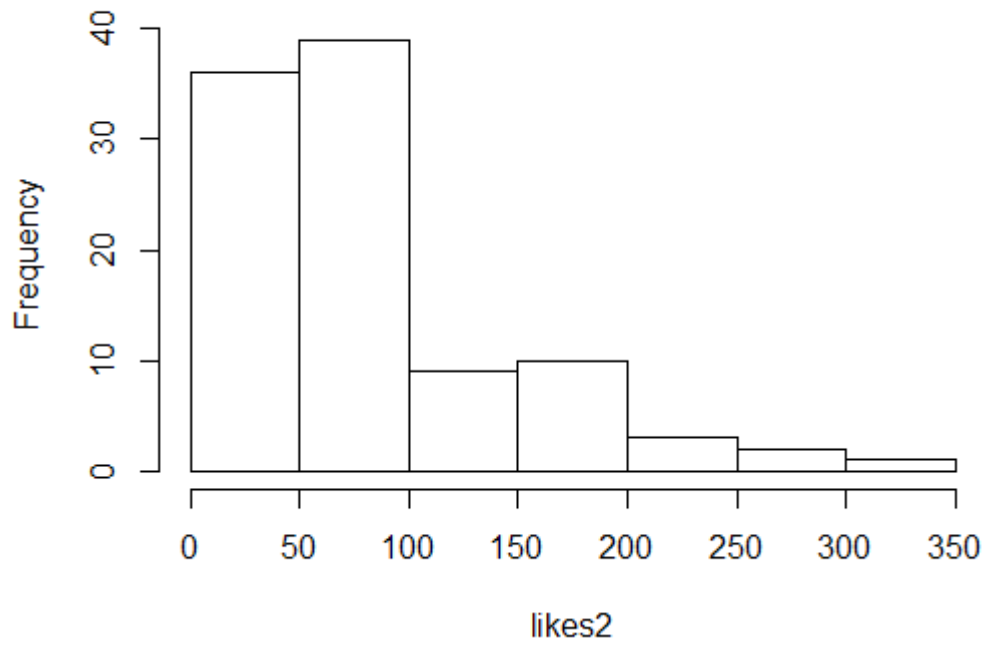


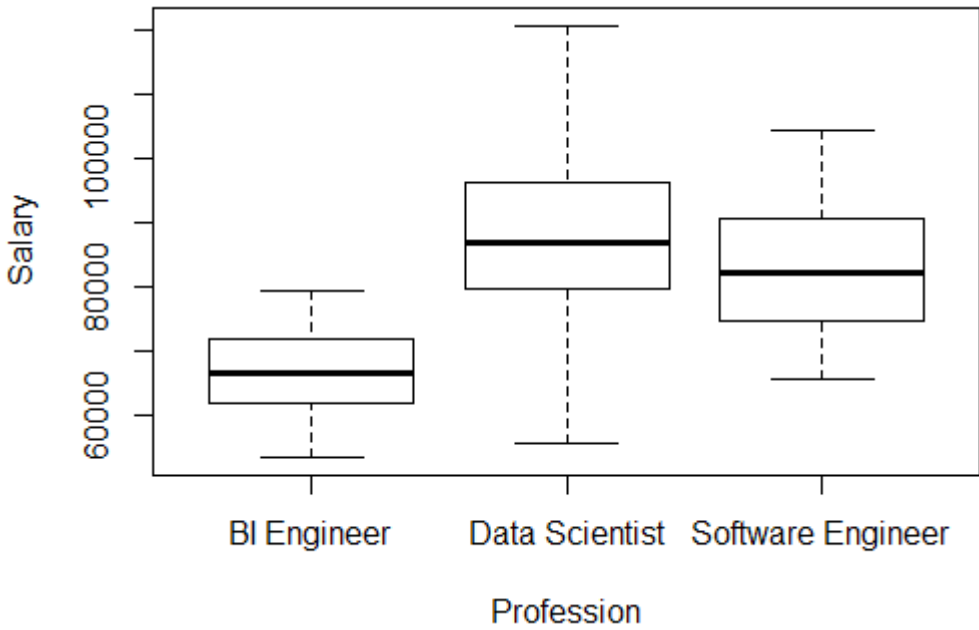
χ^2

Histogram of likes

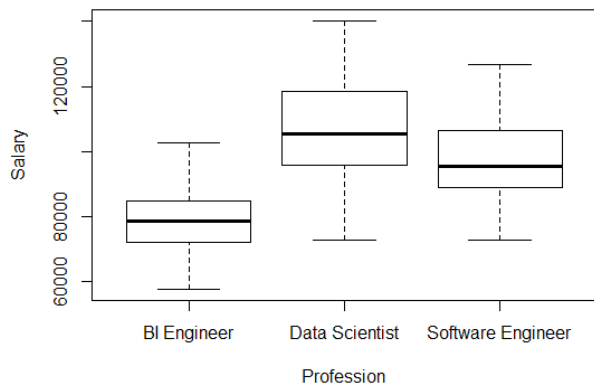


Histogram of likes2

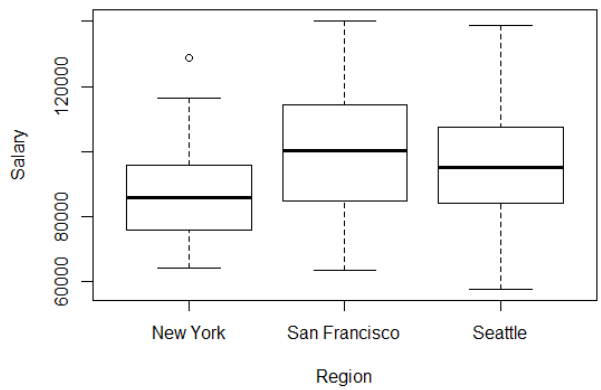




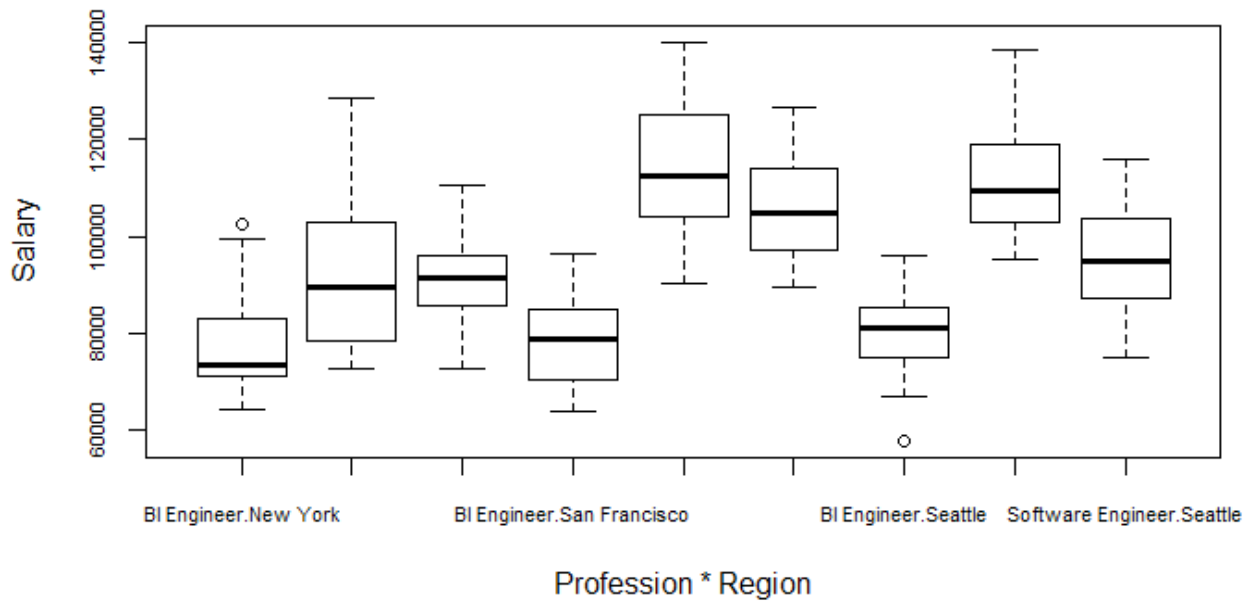
Salary v.s. Profession



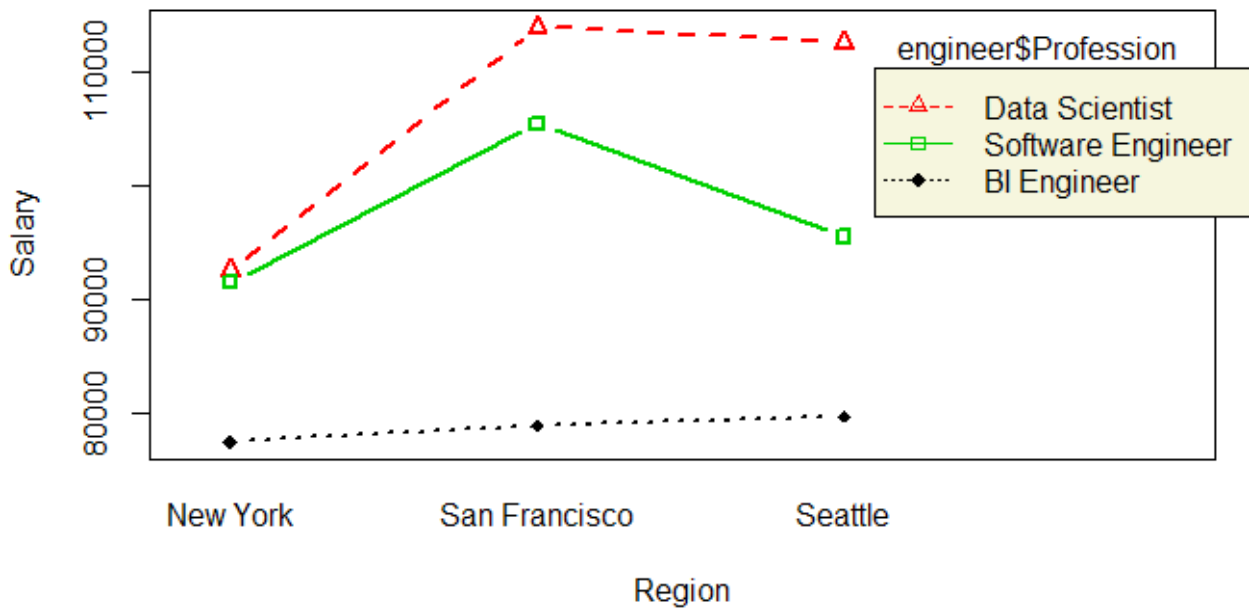
Salary v.s. Region



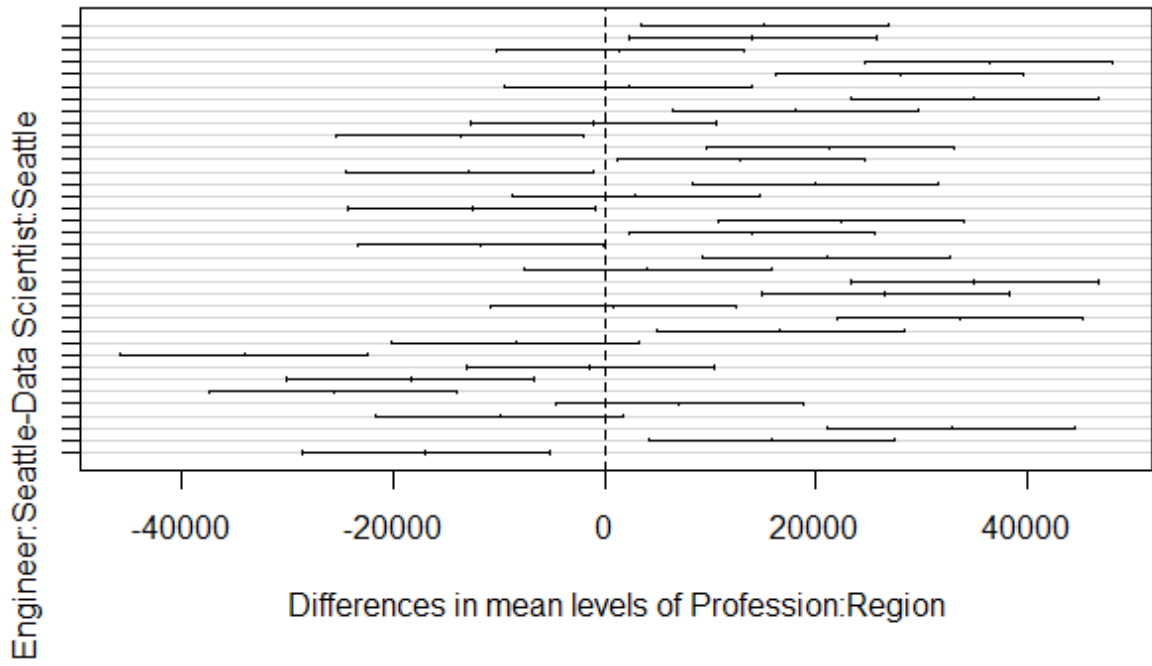
Salary v.s. Profession * Region



Interaction Plot



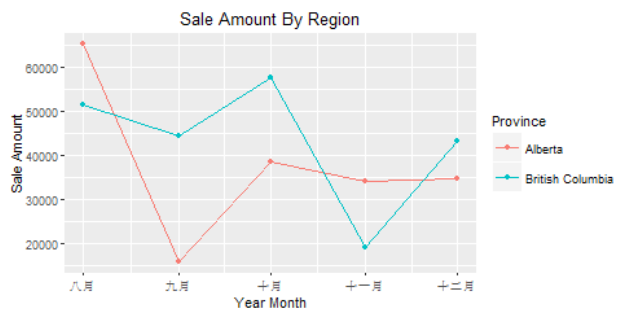
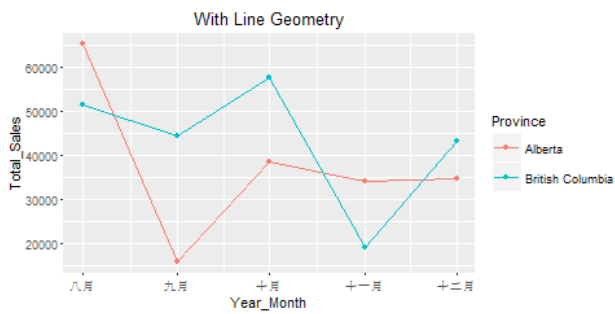
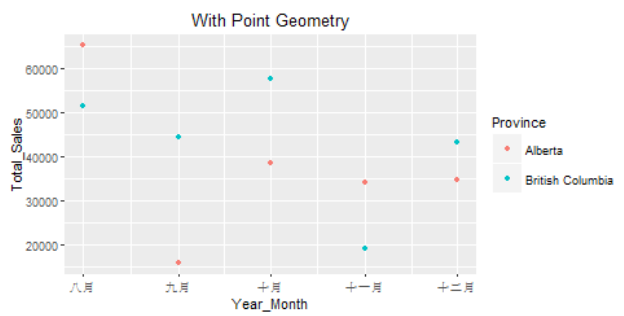
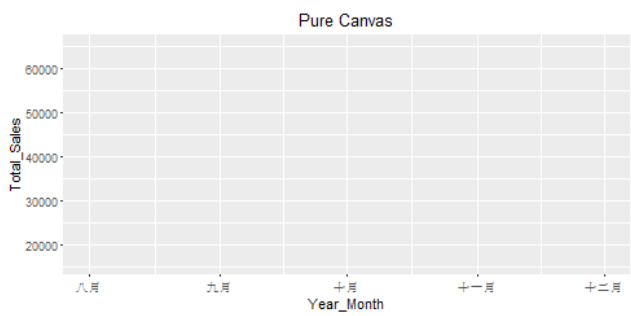
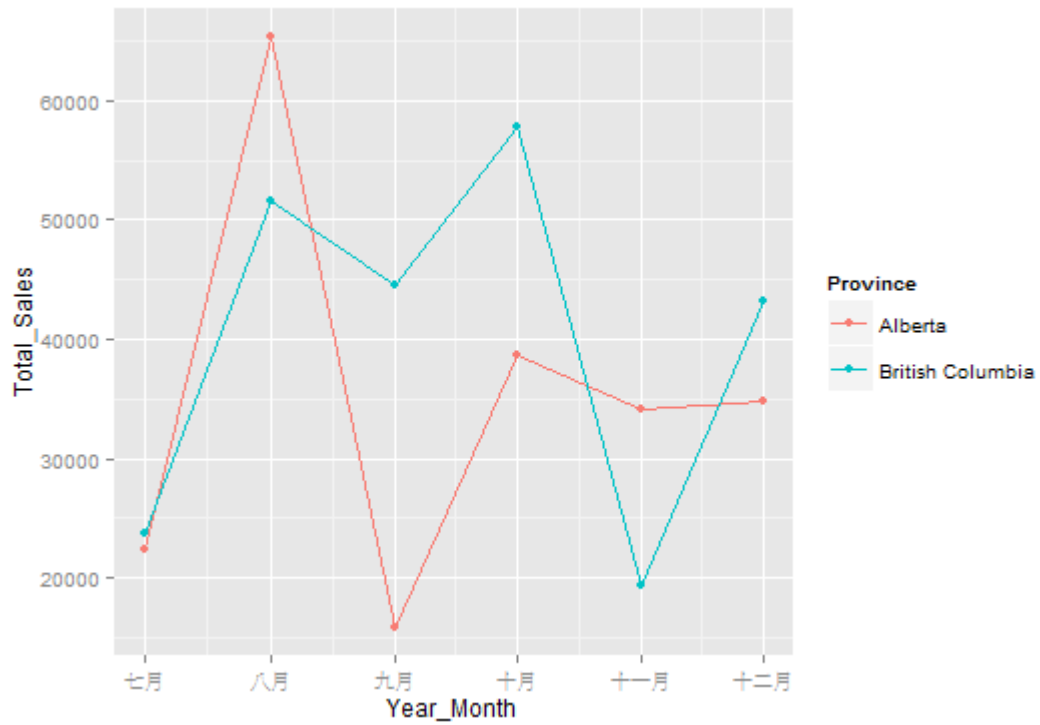
95% family-wise confidence level

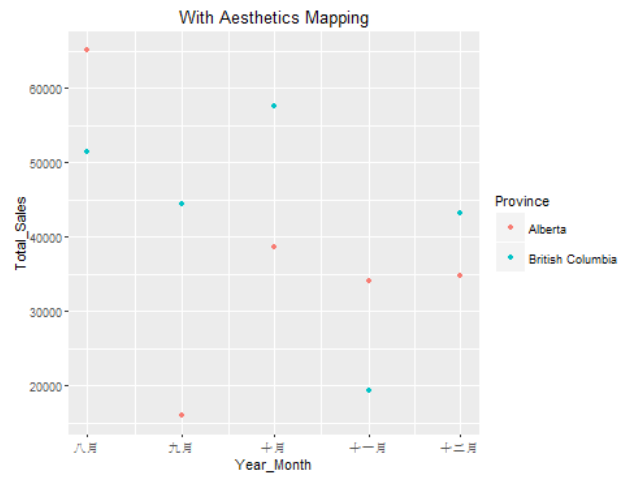
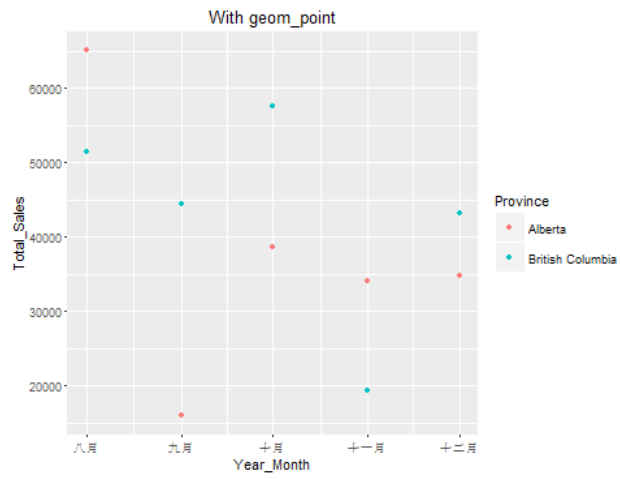
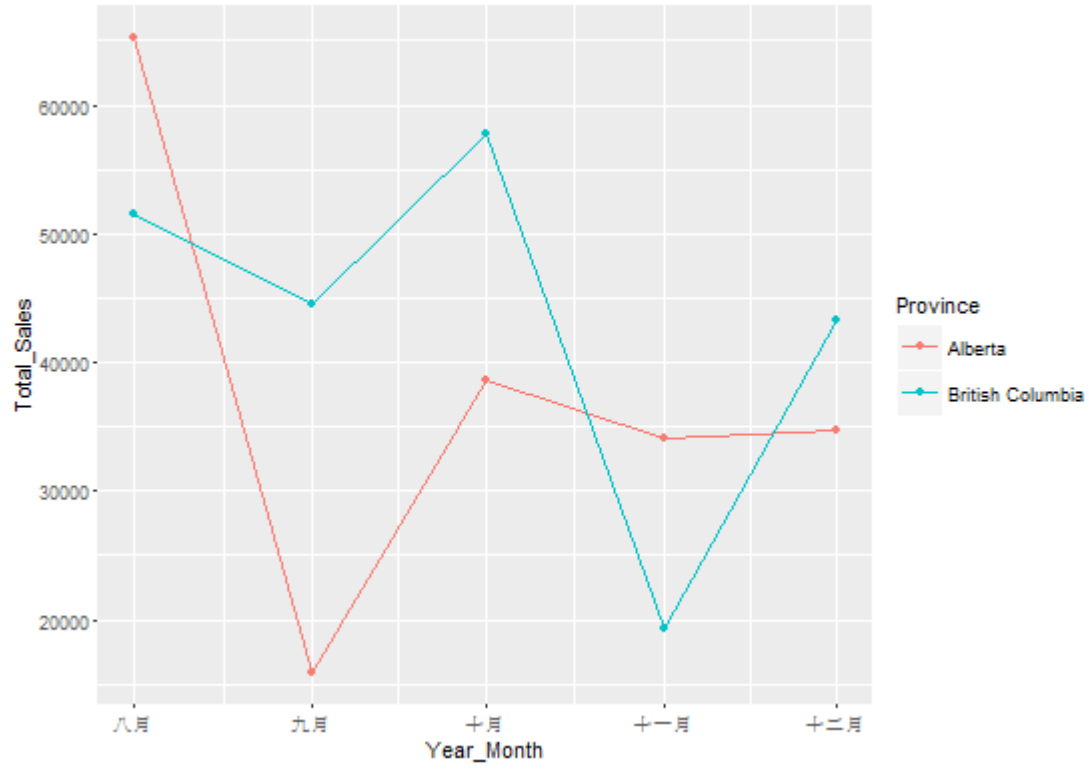


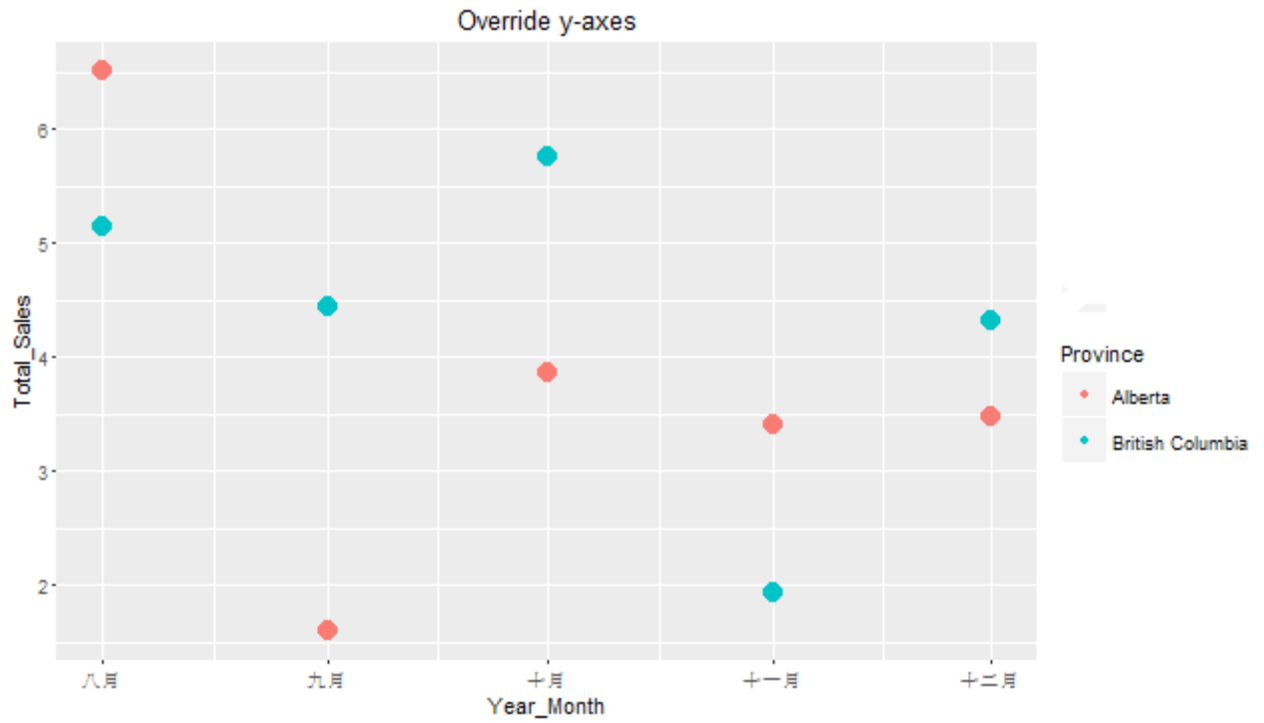
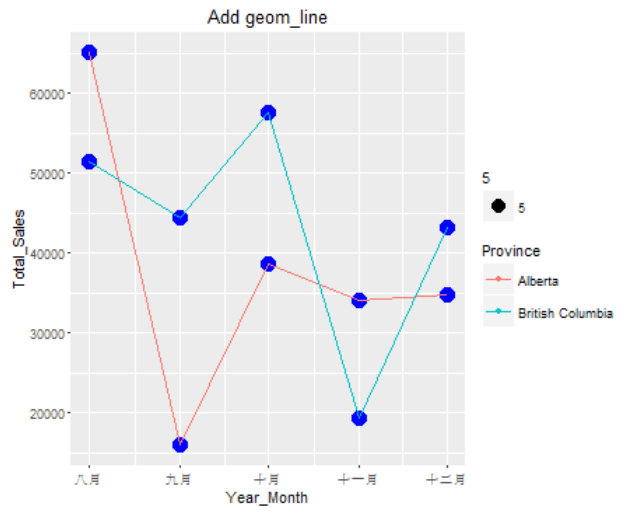
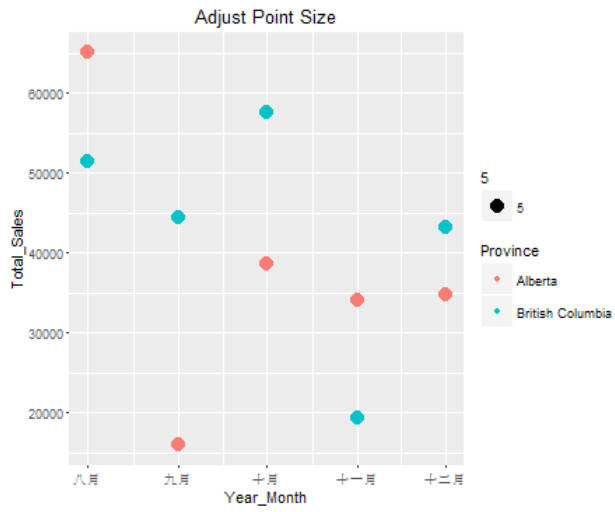
Chapter 6: Making Interactive Reports

There are no images in this chapter

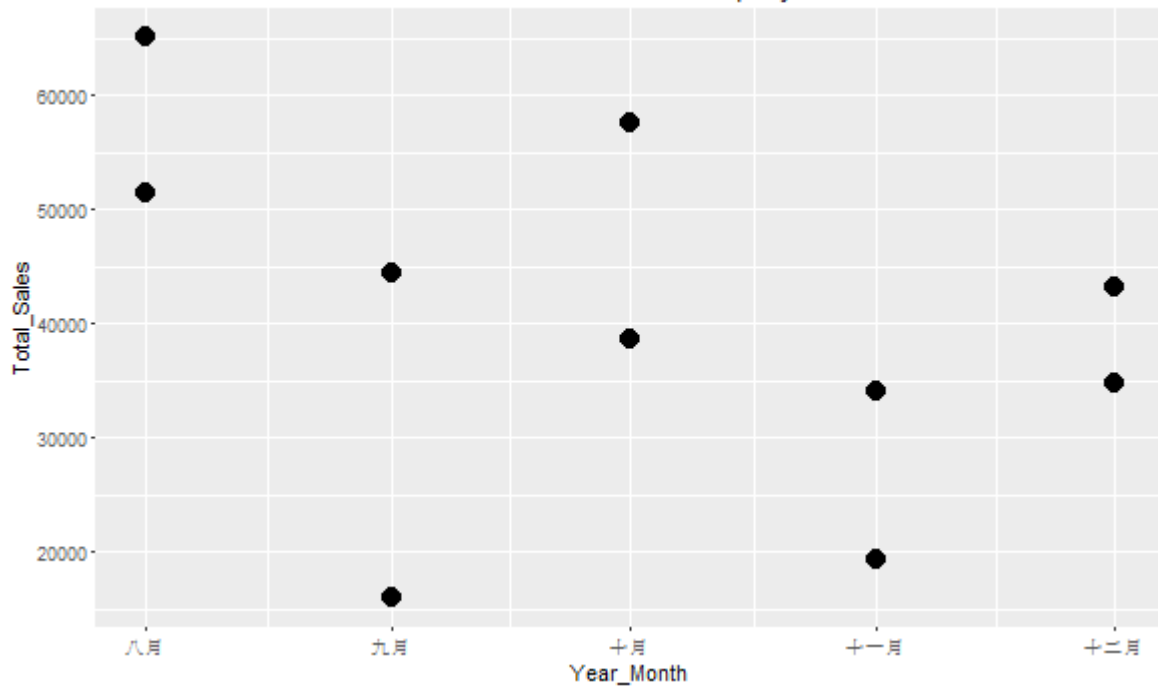
Chapter 7: Simulation from Probability Distributions



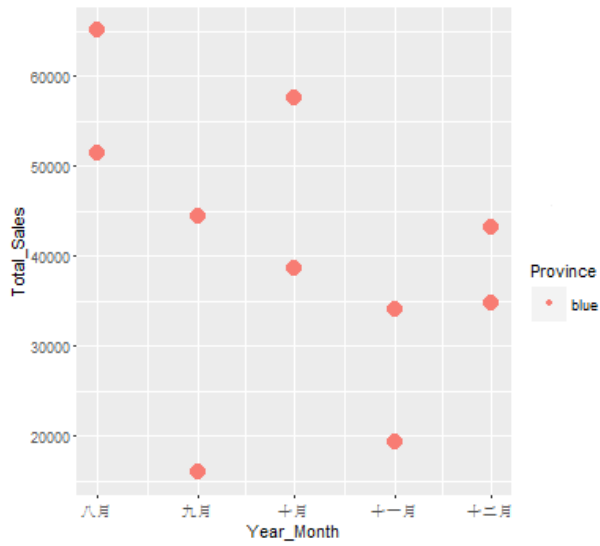




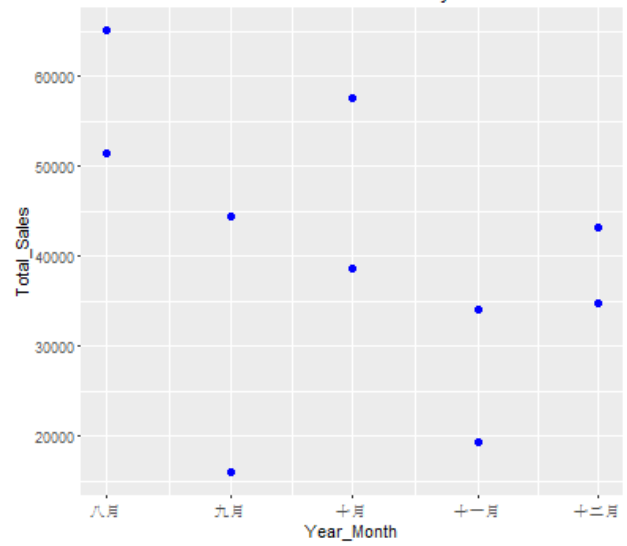
Remove Aesthetics Property

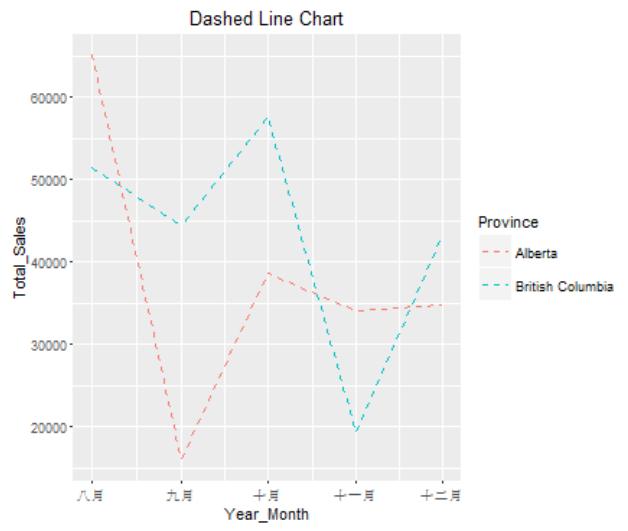
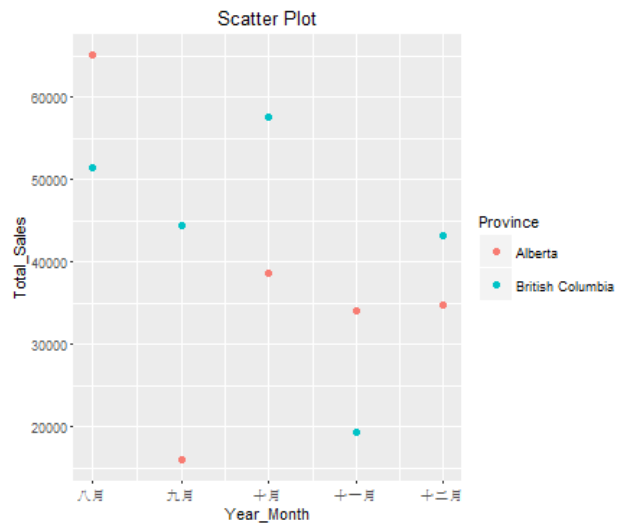


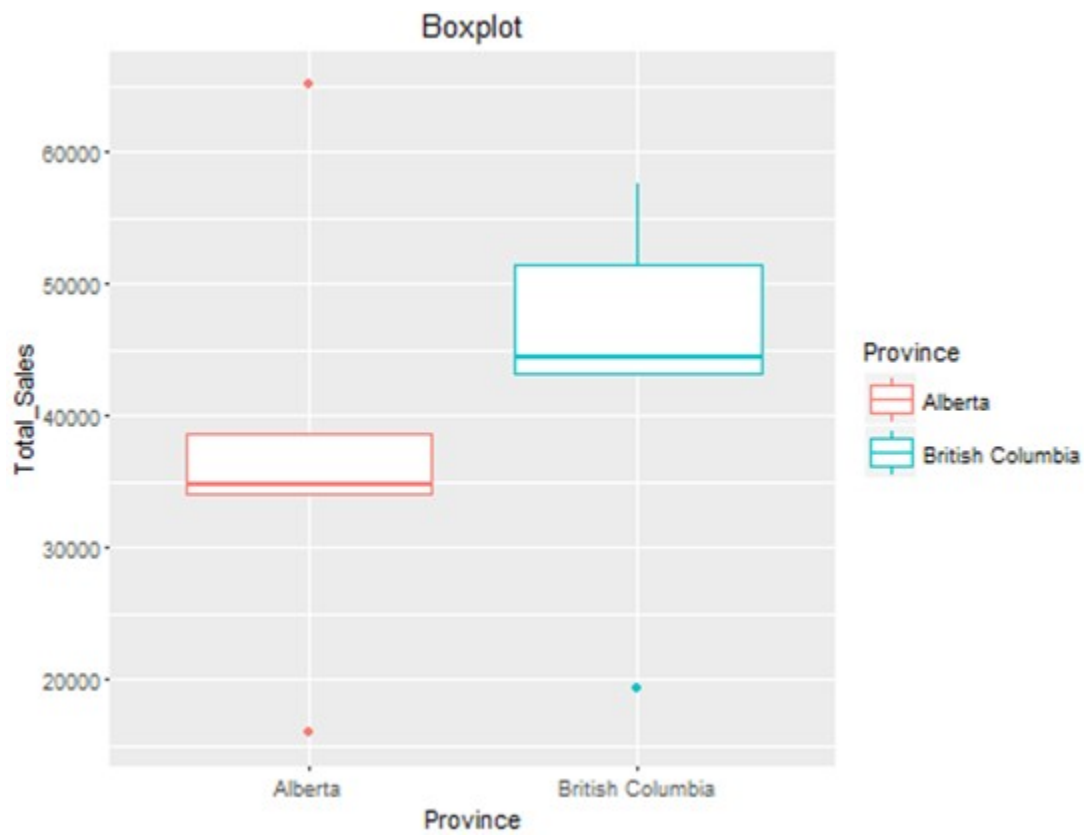
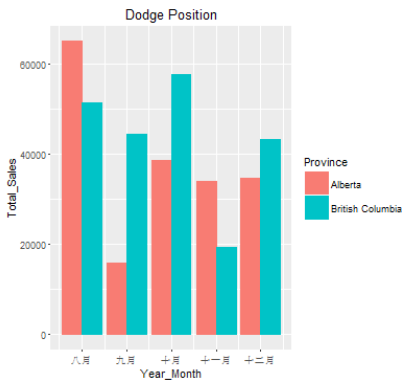
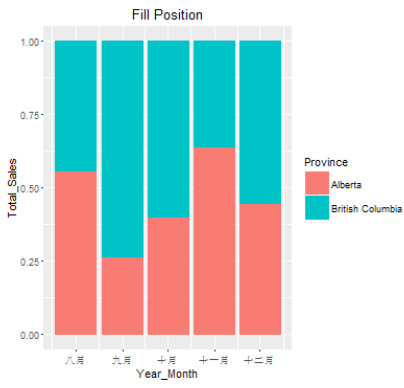
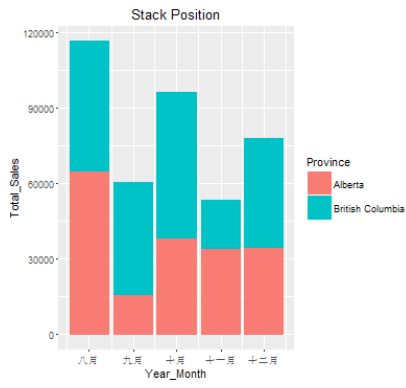
Set Color to Blue in Aes Function

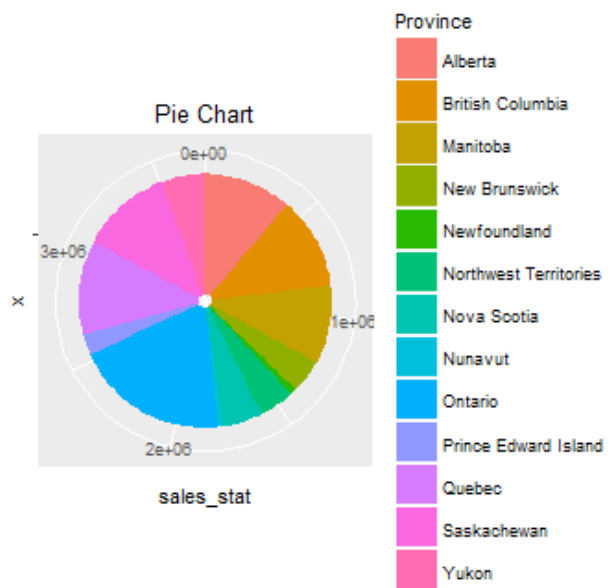
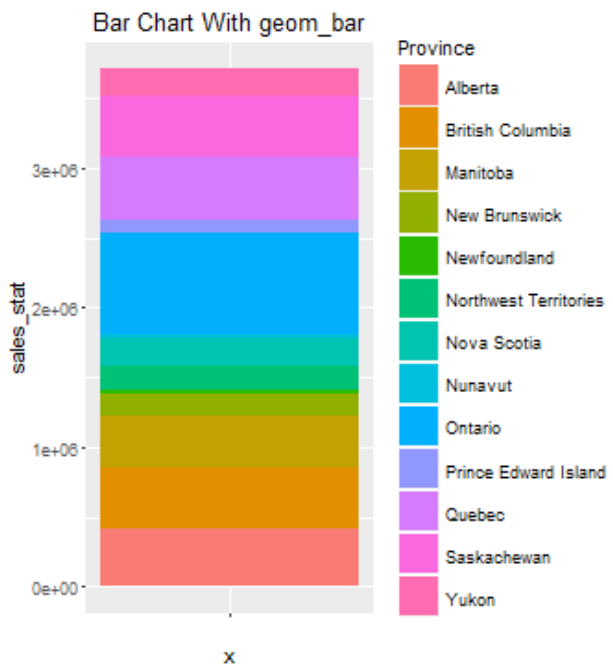
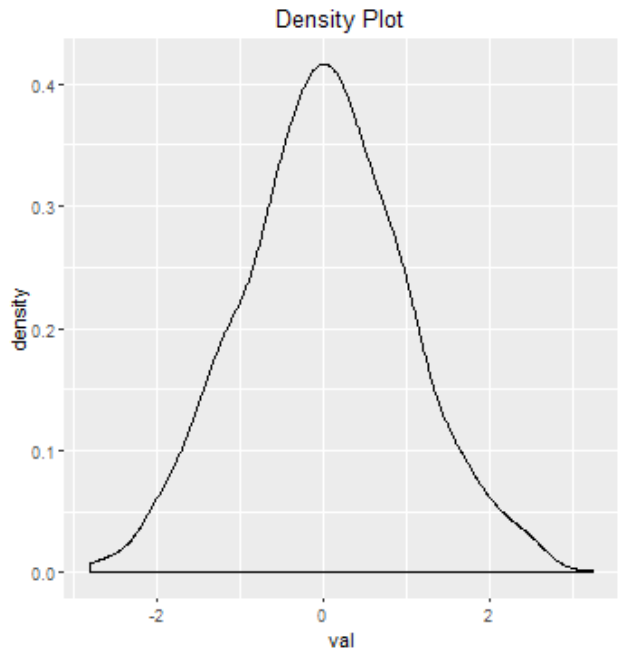
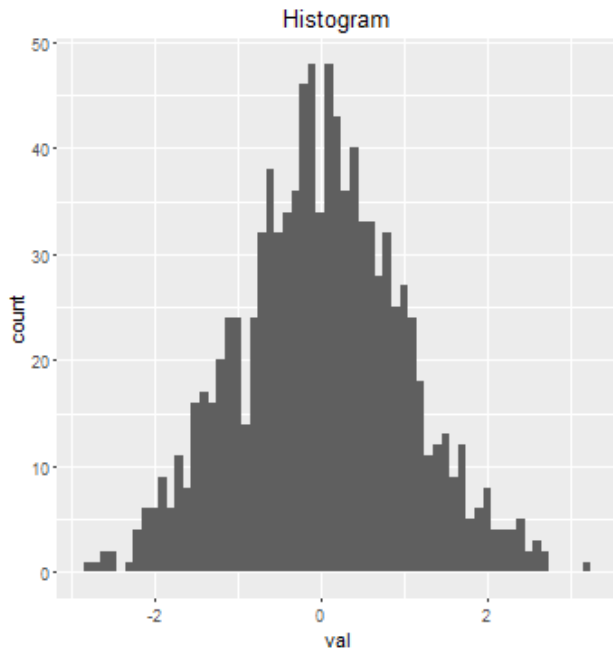


Set Color to Blue in Layer

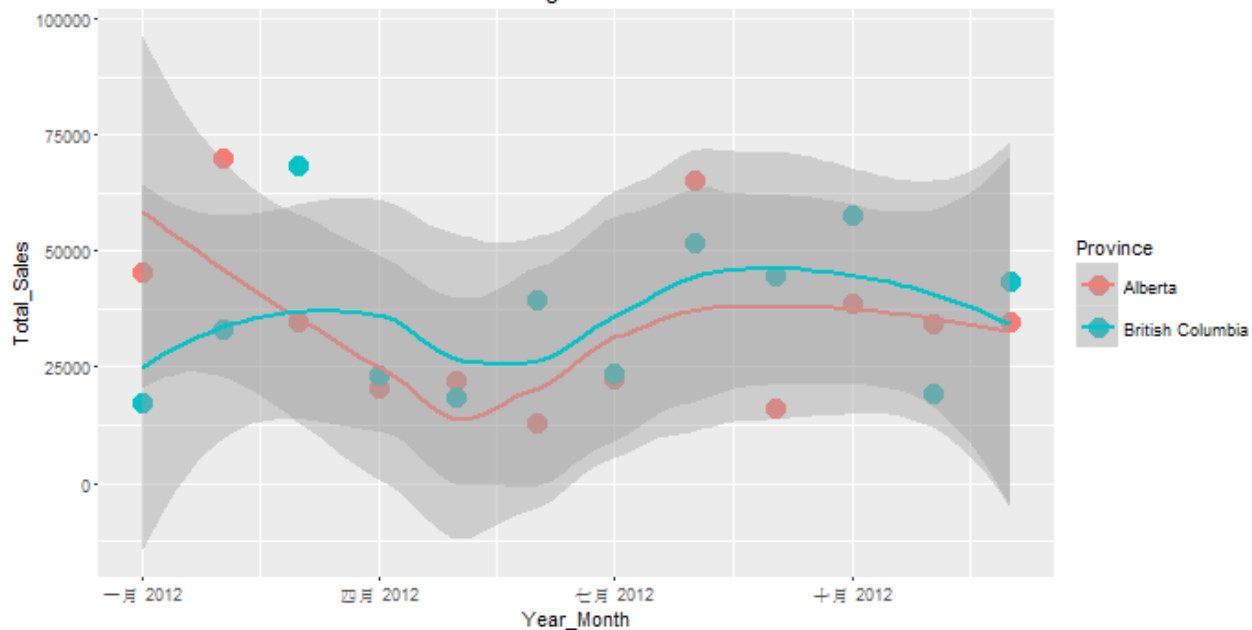




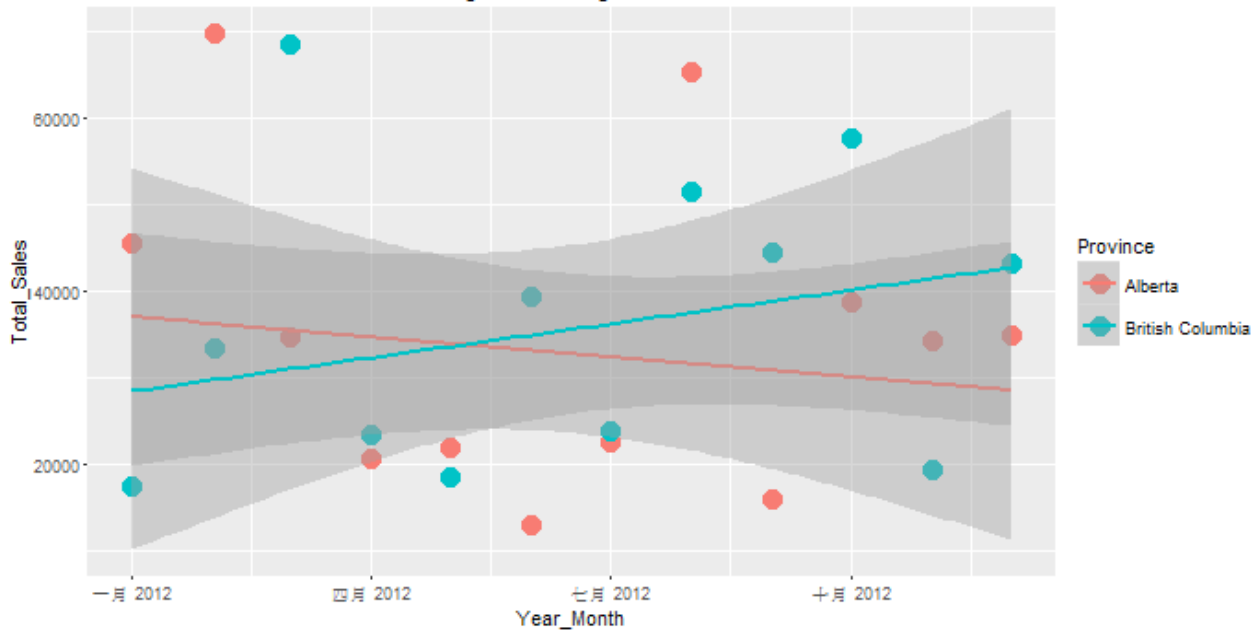




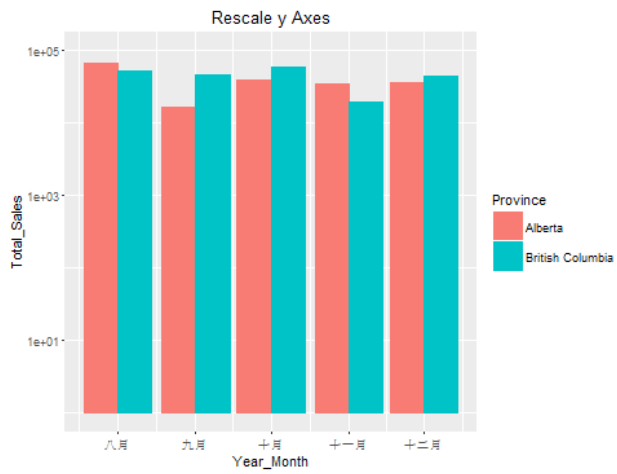
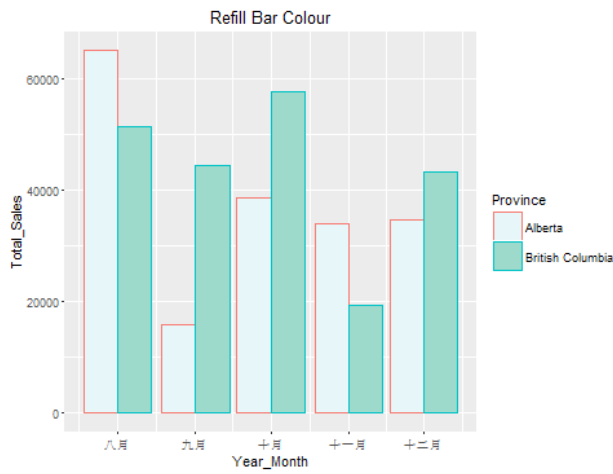
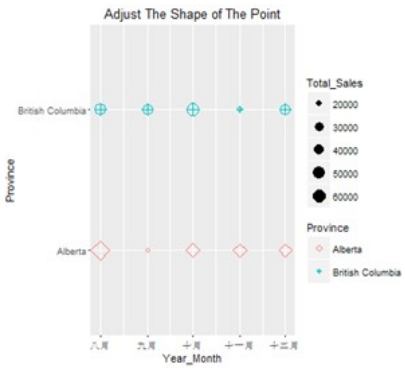
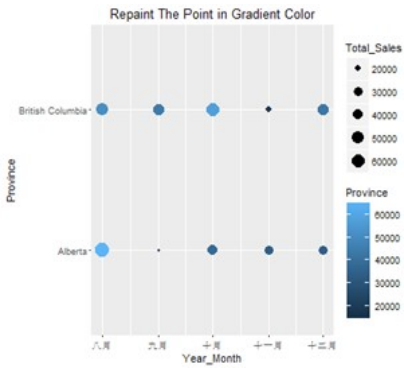
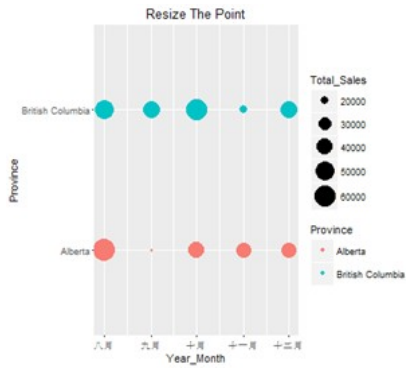
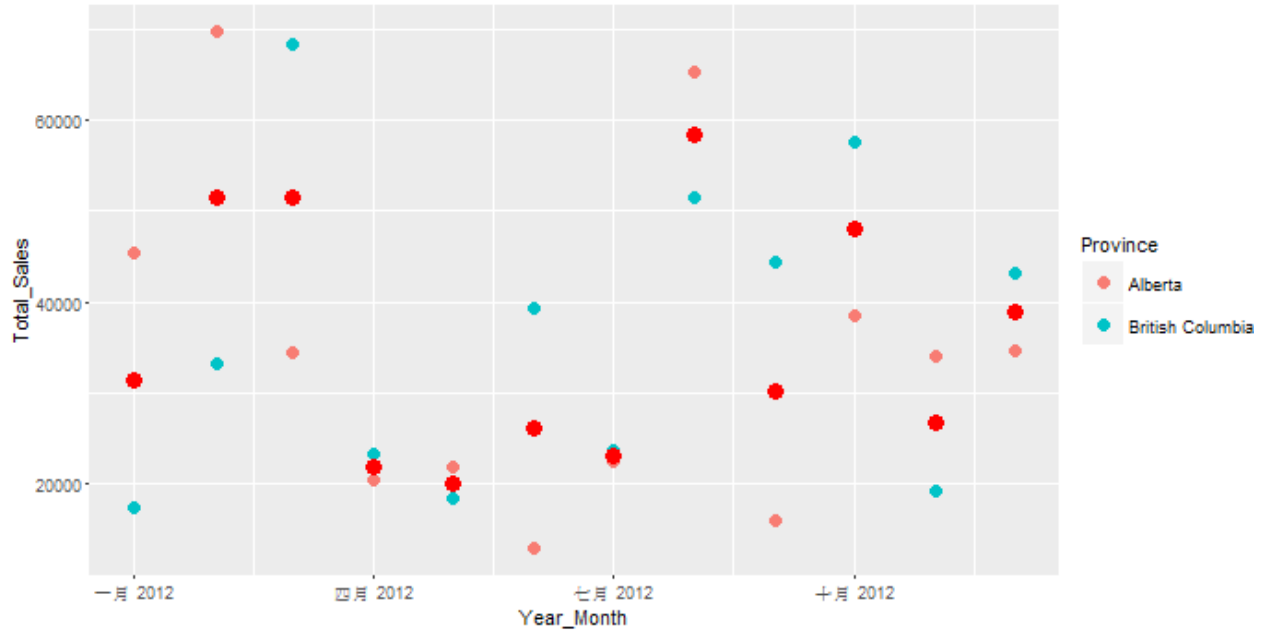
Adding Smoother



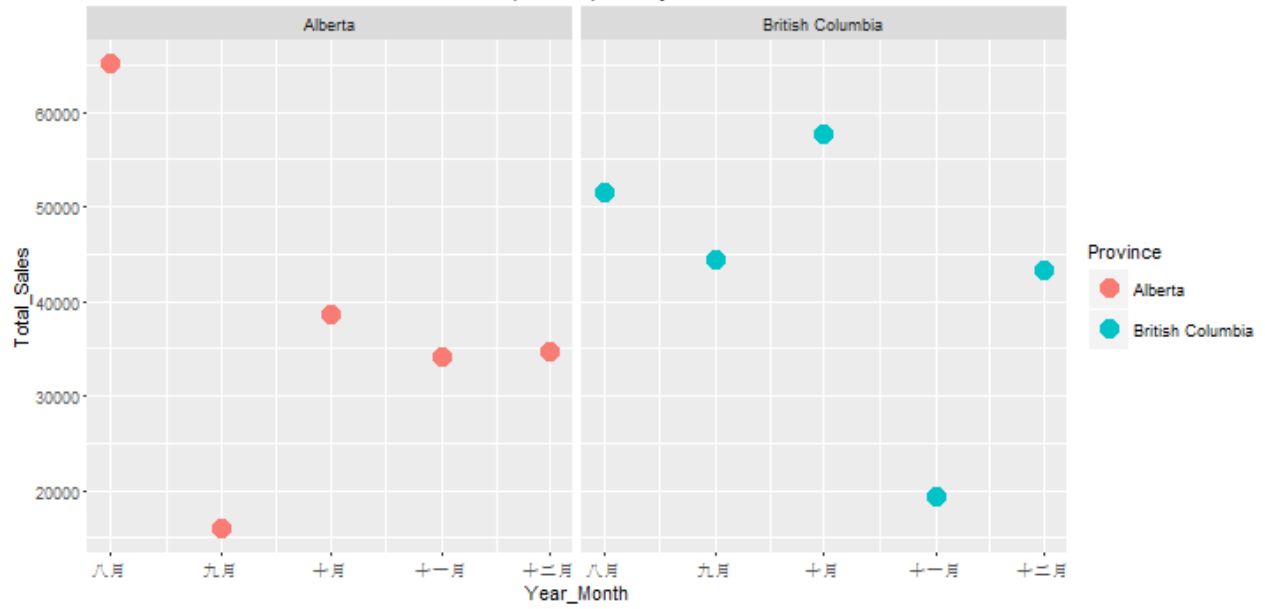
Adding Robust Regression Line



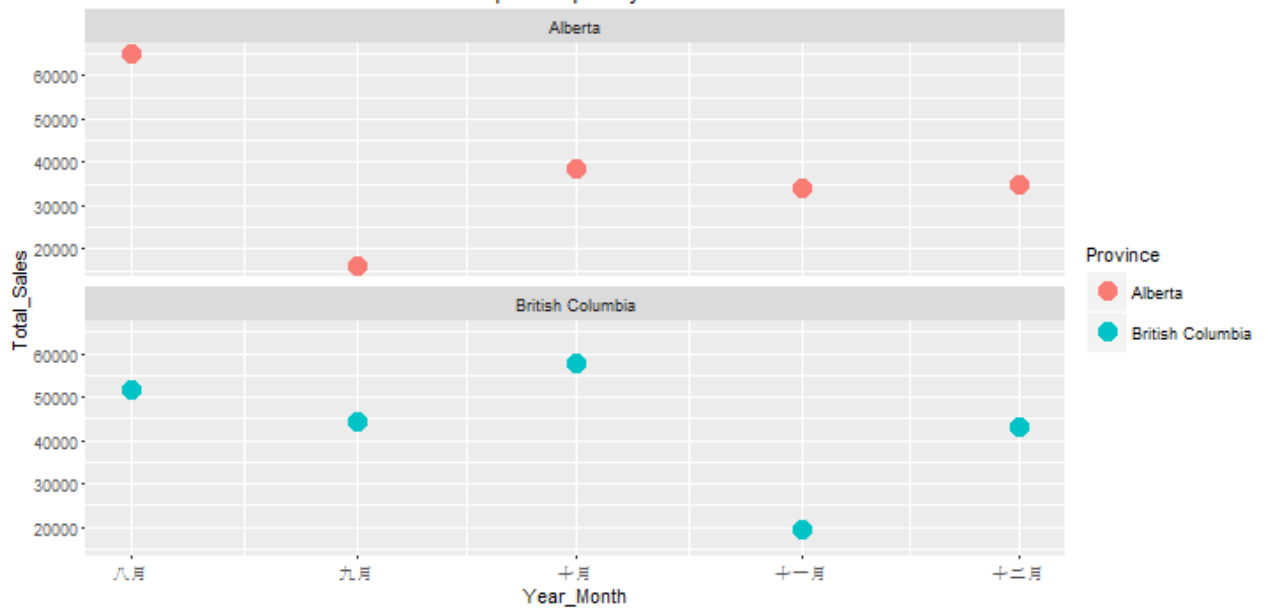
Adding Mean Points



Create Multiple Subplots by Province



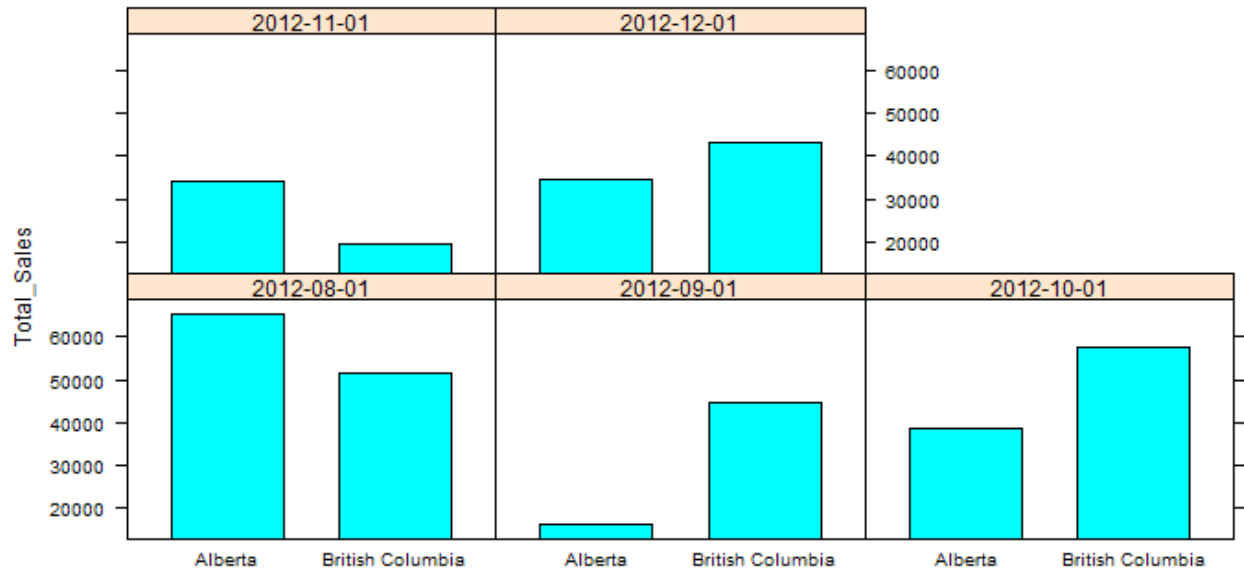
Multiple Subplot by Rows

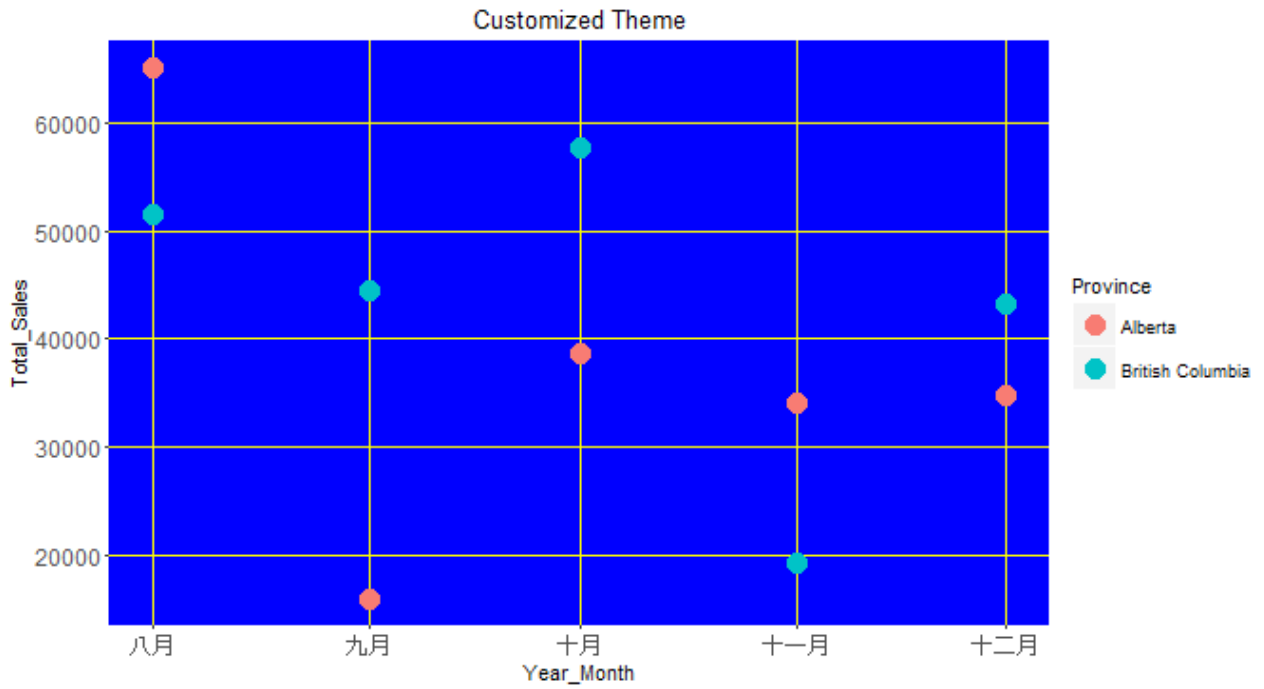
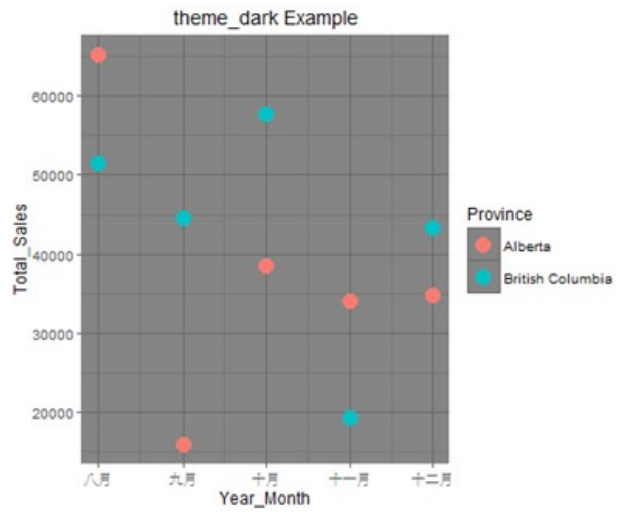
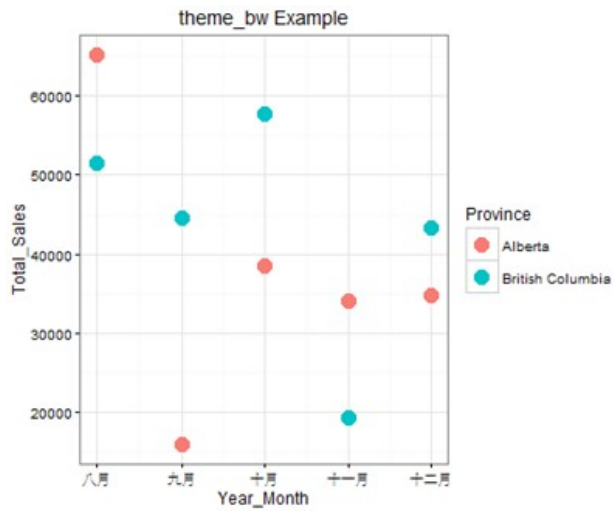


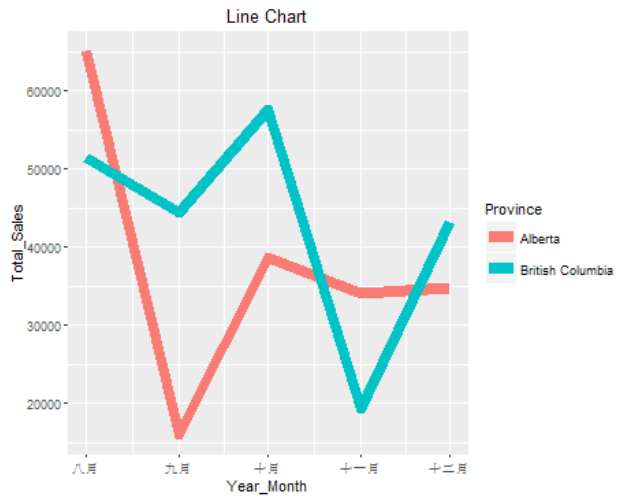
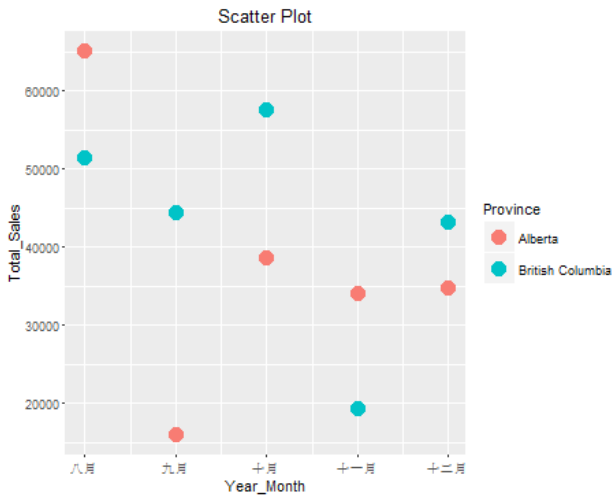
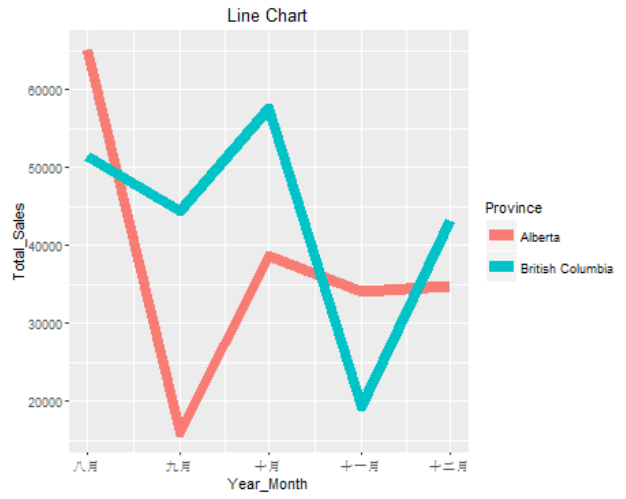
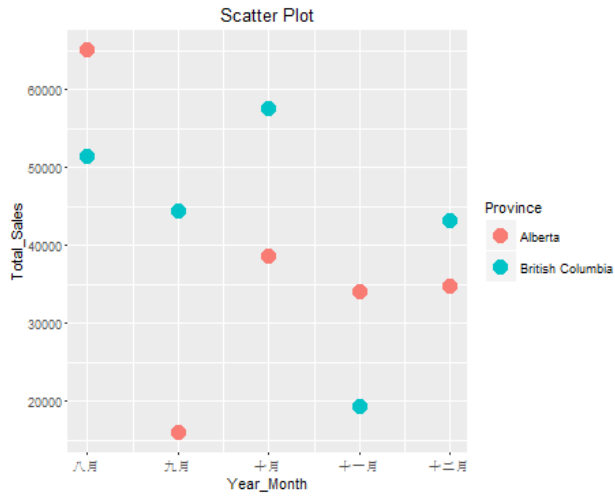
facet_grid Example

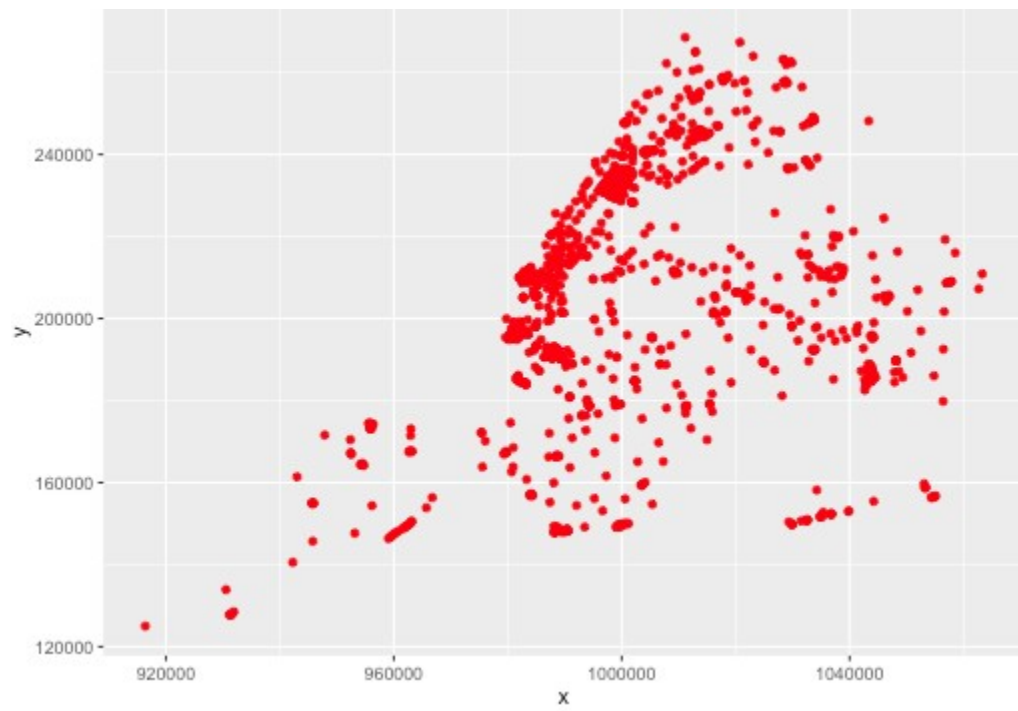
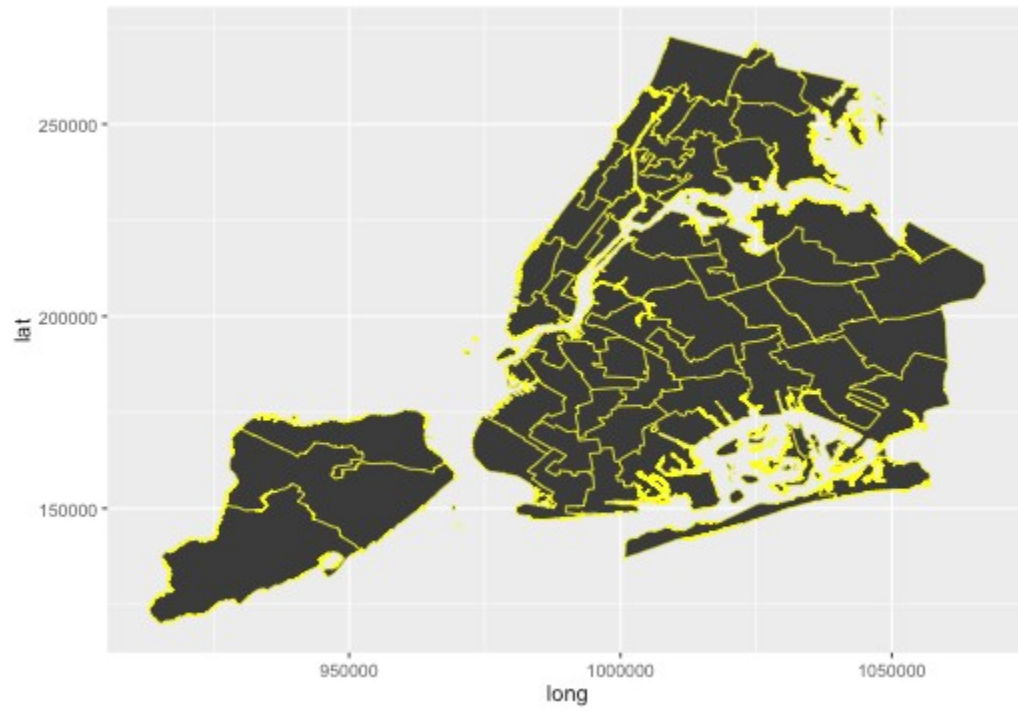


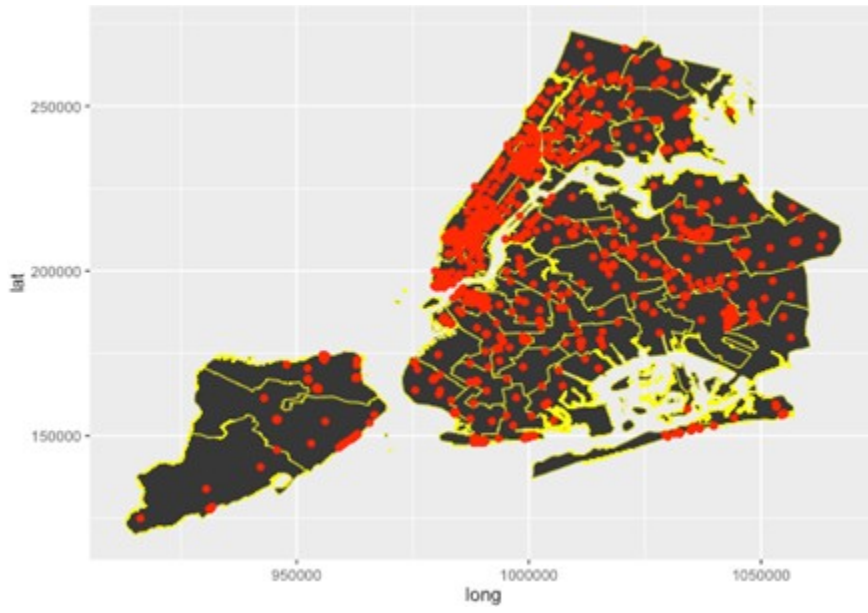
Creating Multiple Subplots With Lattice





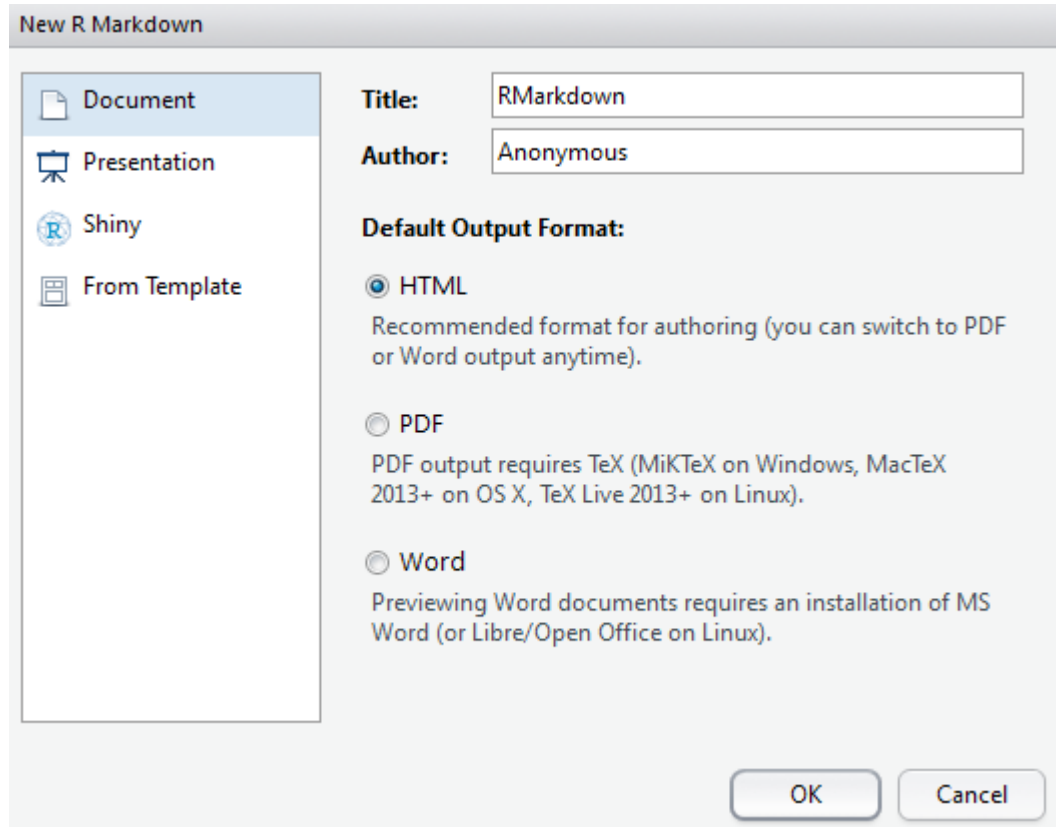
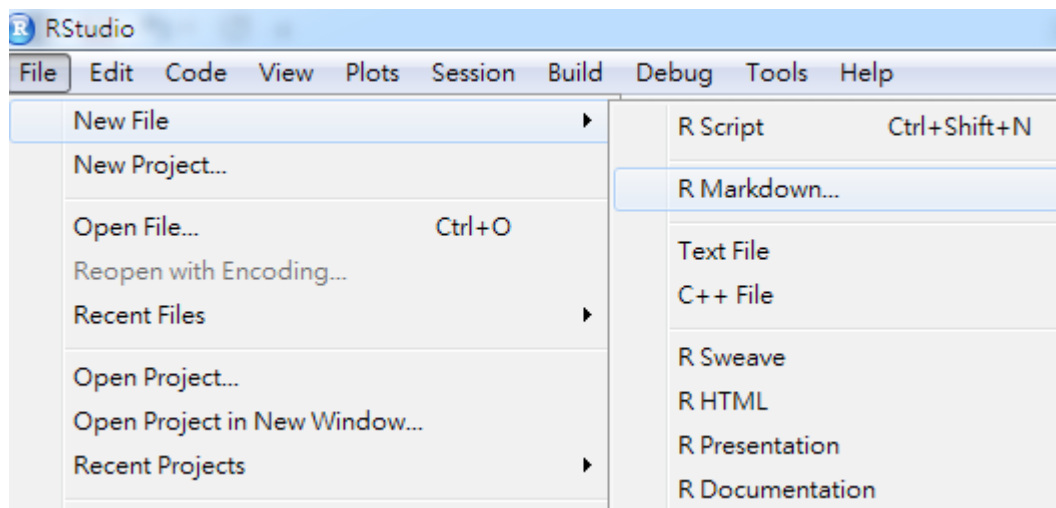


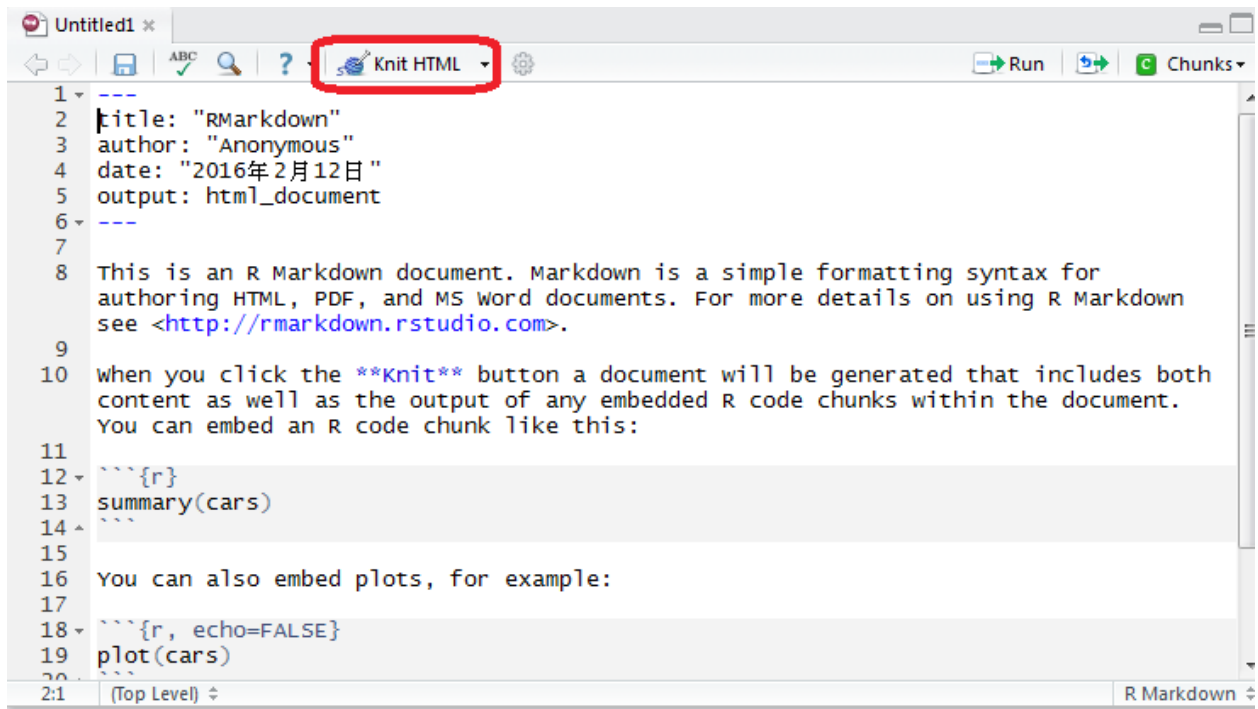






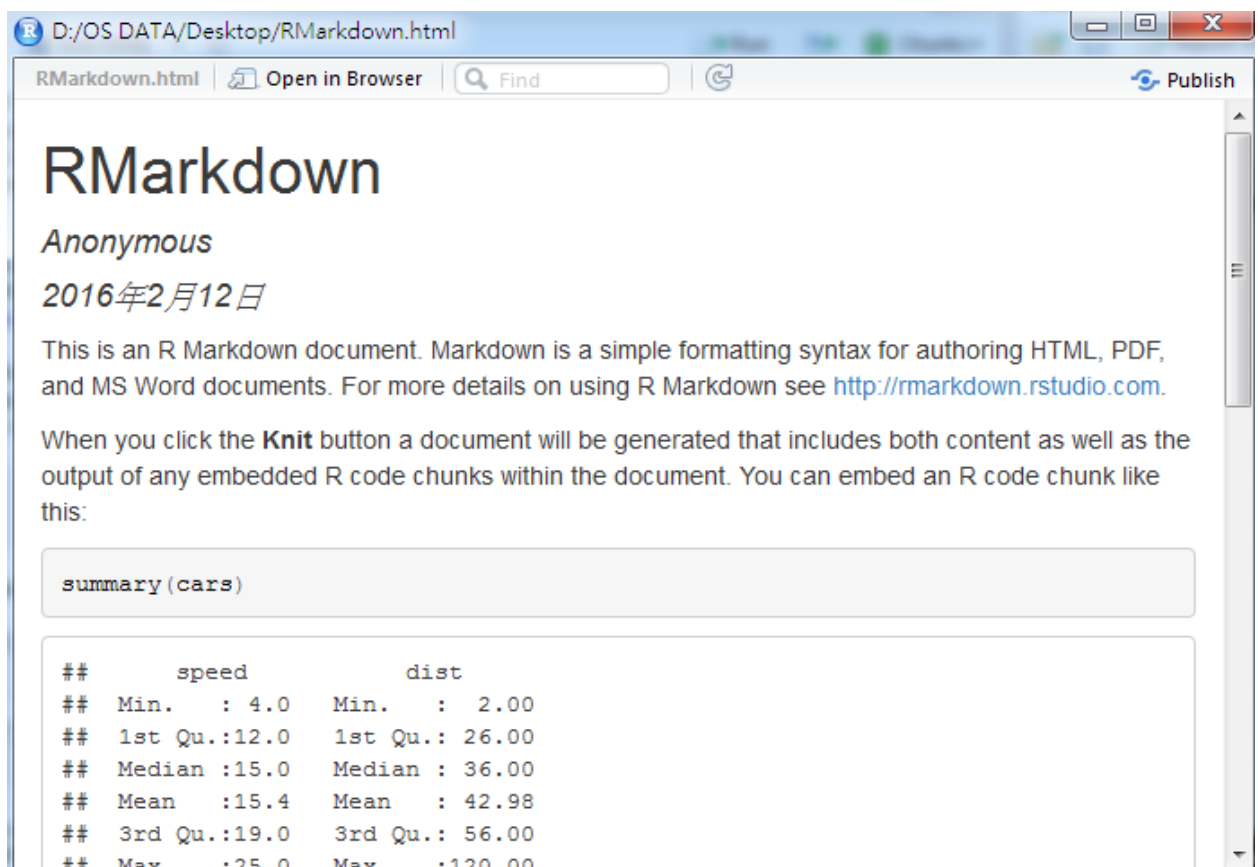
Chapter 8: Statistical Inference in R

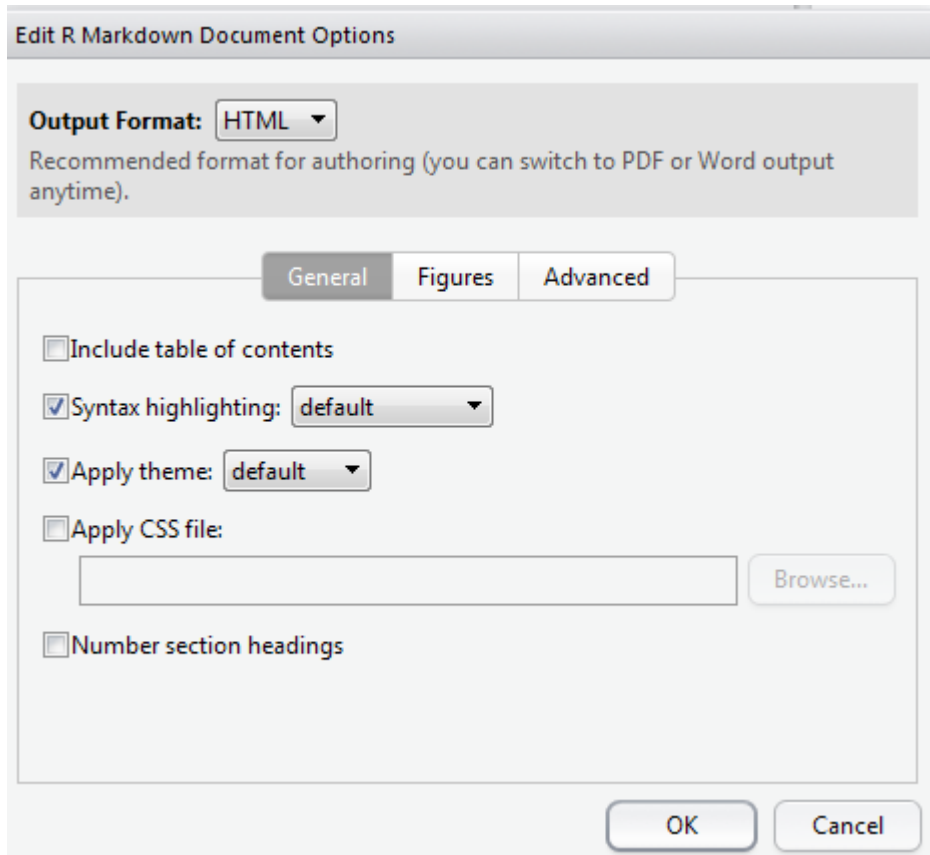
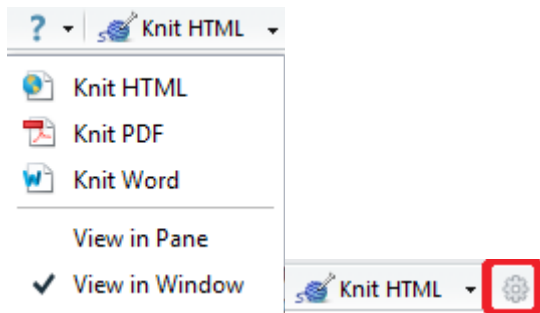




Untitled1 *
Knit HTML Run Chunks

```
1 ---  
2 title: "RMarkdown"  
3 author: "Anonymous"  
4 date: "2016年2月12日"  
5 output: html_document  
6 ---  
7  
8 This is an R Markdown document. Markdown is a simple formatting syntax for  
authoring HTML, PDF, and MS word documents. For more details on using R Markdown  
see <http://rmarkdown.rstudio.com>.  
9  
10 When you click the knit button a document will be generated that includes both  
content as well as the output of any embedded R code chunks within the document.  
You can embed an R code chunk like this:  
11  
12 ```{r}  
13 summary(cars)  
14 ```  
15  
16 You can also embed plots, for example:  
17  
18 ```{r, echo=FALSE}  
19 plot(cars)  
20 ```  
21 (Top Level)
```





	This is plan text
H1	<i>italics1</i>
	<i>italics2</i>
H2	bold1
	bold2
H3	Strikethrough

1. First Ordered list item
2. Second Ordered List Item
 - Unordered sub-list
- Unordered List Item
 1. Ordered sub-list-1
 2. Ordered sub-list-2

NAME	AGE	GENDER
Andy	23	M
Brian	33	M
Judy	18	F

```
# code block  
a <- 3  
b <- 2  
a + b
```

```
## [1] 5
```

```
no syntax highlighting
```



```
# code block  
a <- 3  
b <- 2  
a + b
```

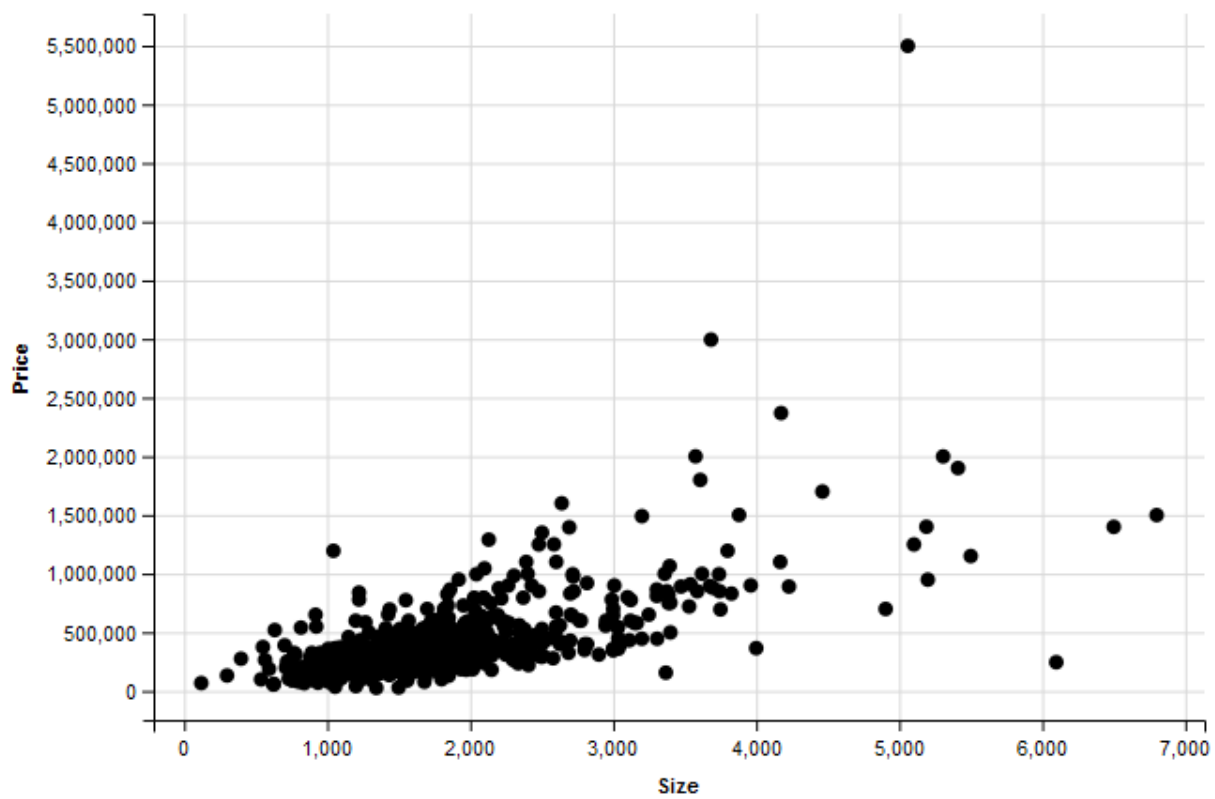
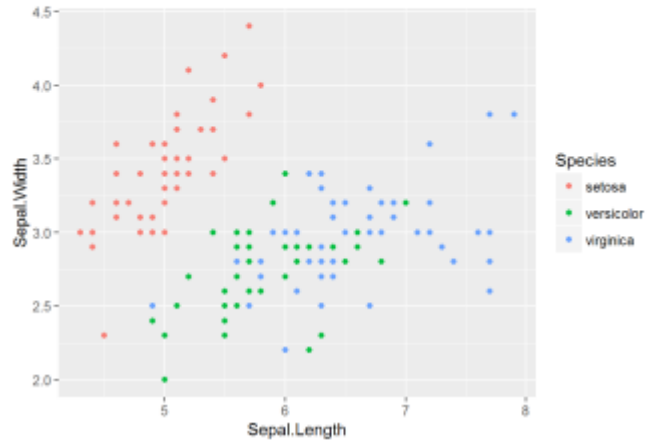
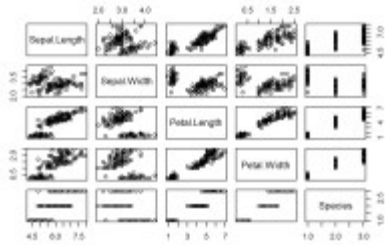
```
## [1] 5
```

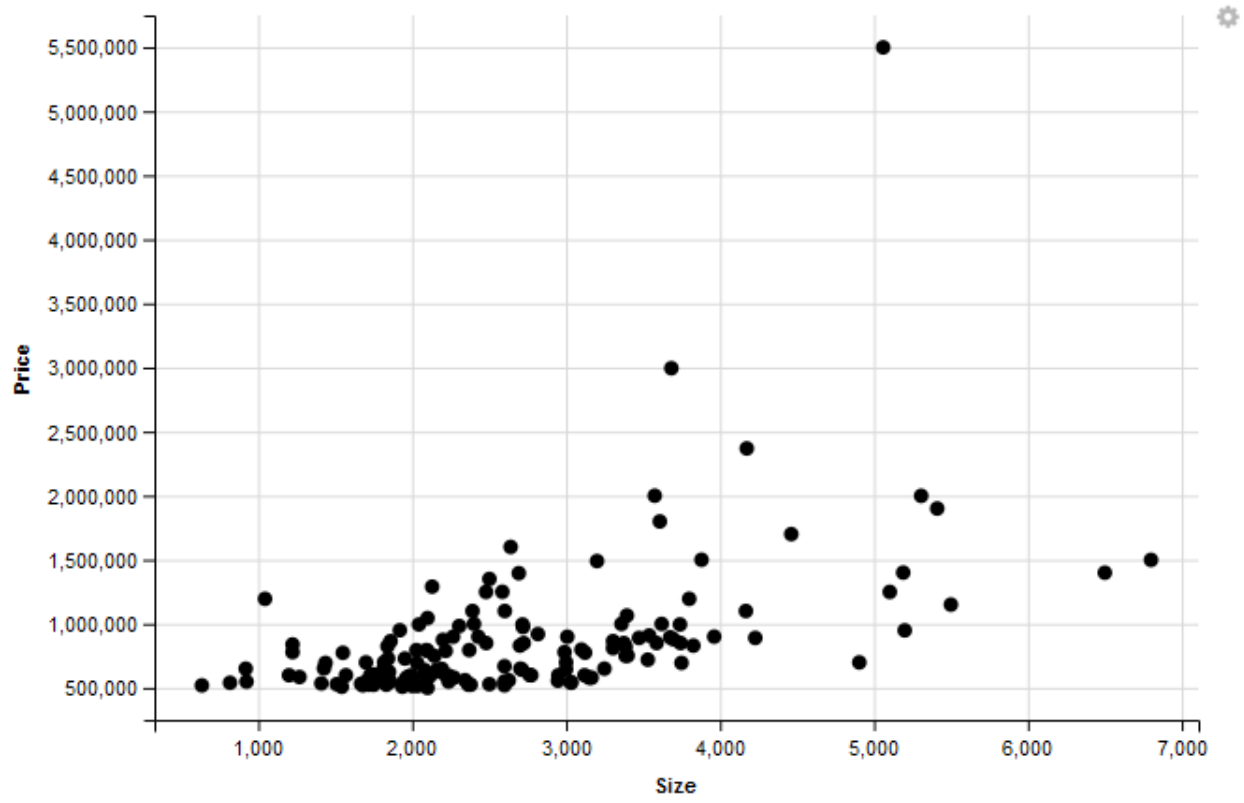
```
## [1] 5
```

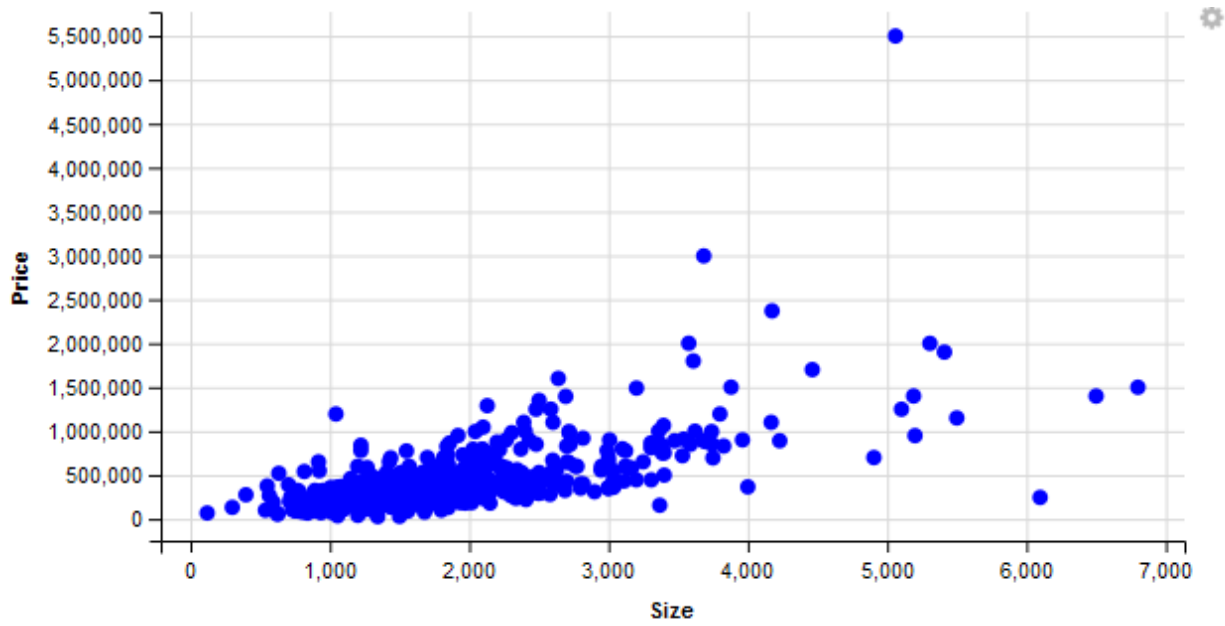
```
# code block  
a <- 3  
b <- 2  
a + b
```

```
library(ggplot2)
g <- ggplot(data=iris, mapping=aes(x=Sepal.Length, y=Sepal.Width, colour=Species))
print(g + geom_point())
```

```
data(iris)
plot(iris)
```

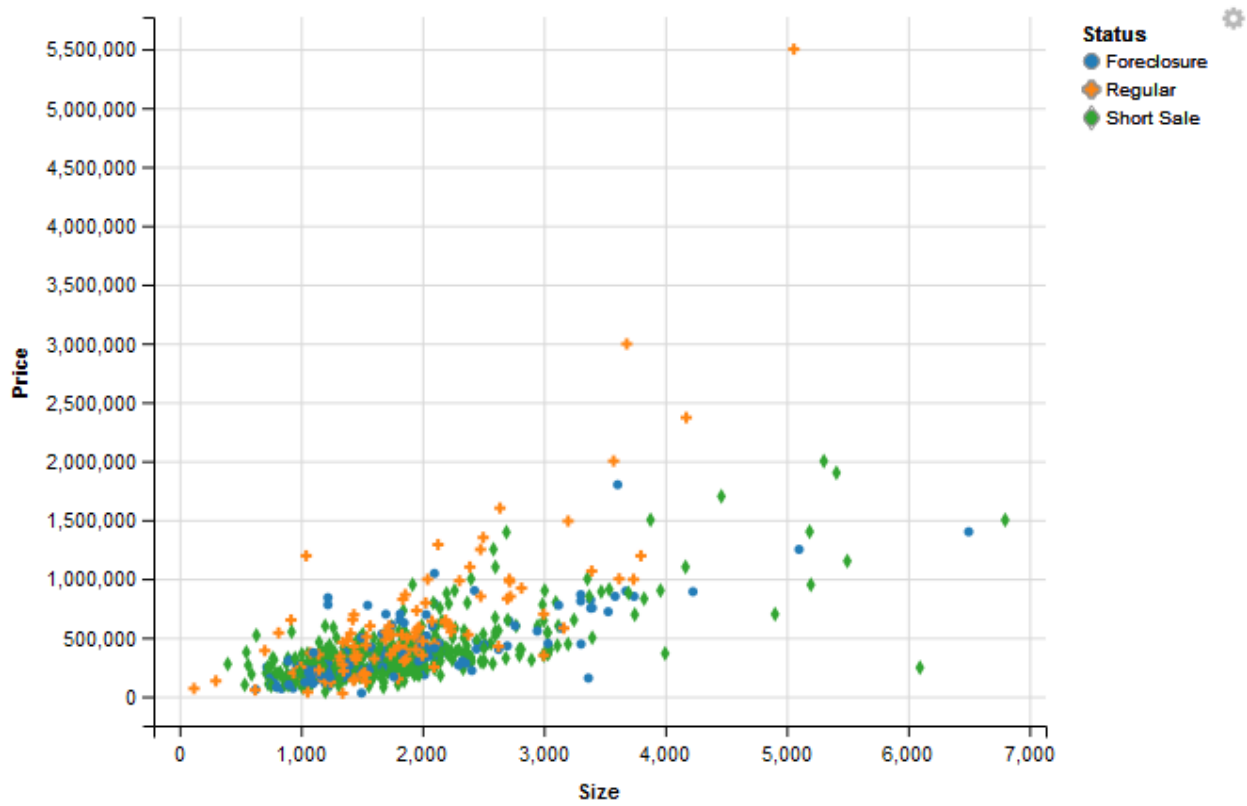


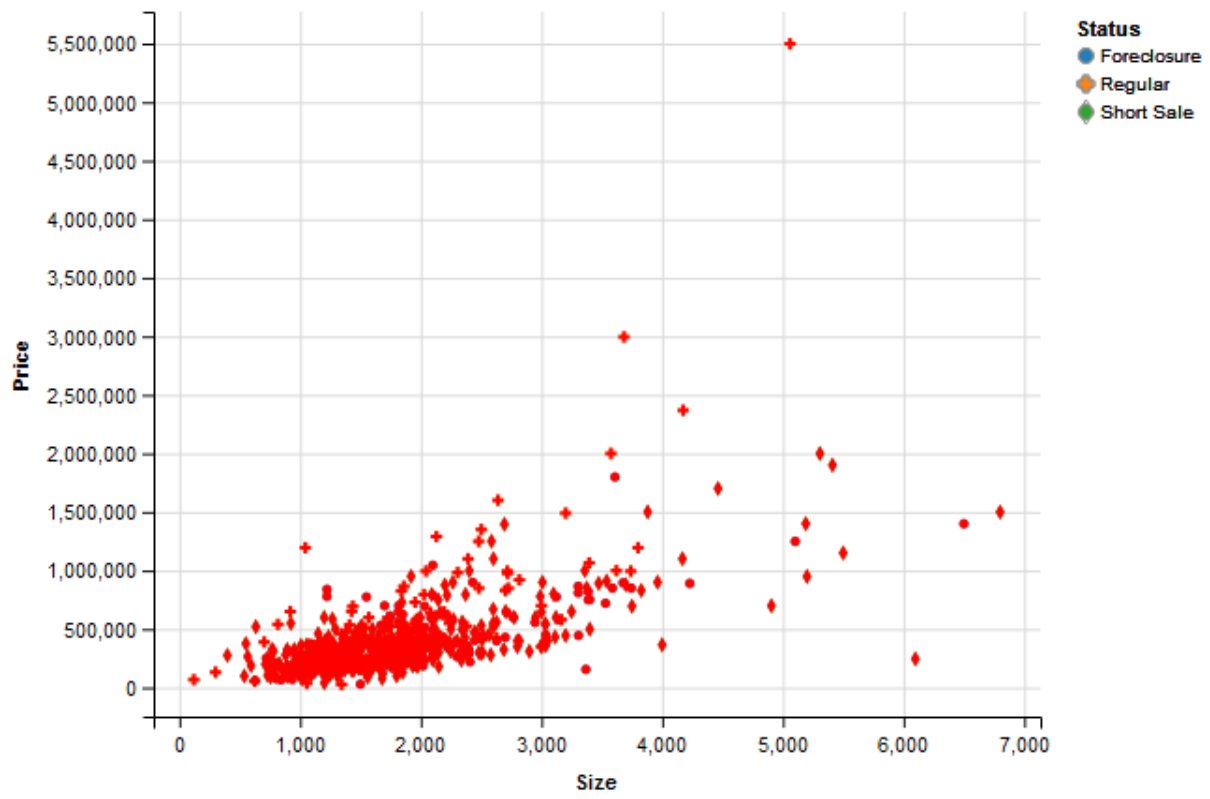


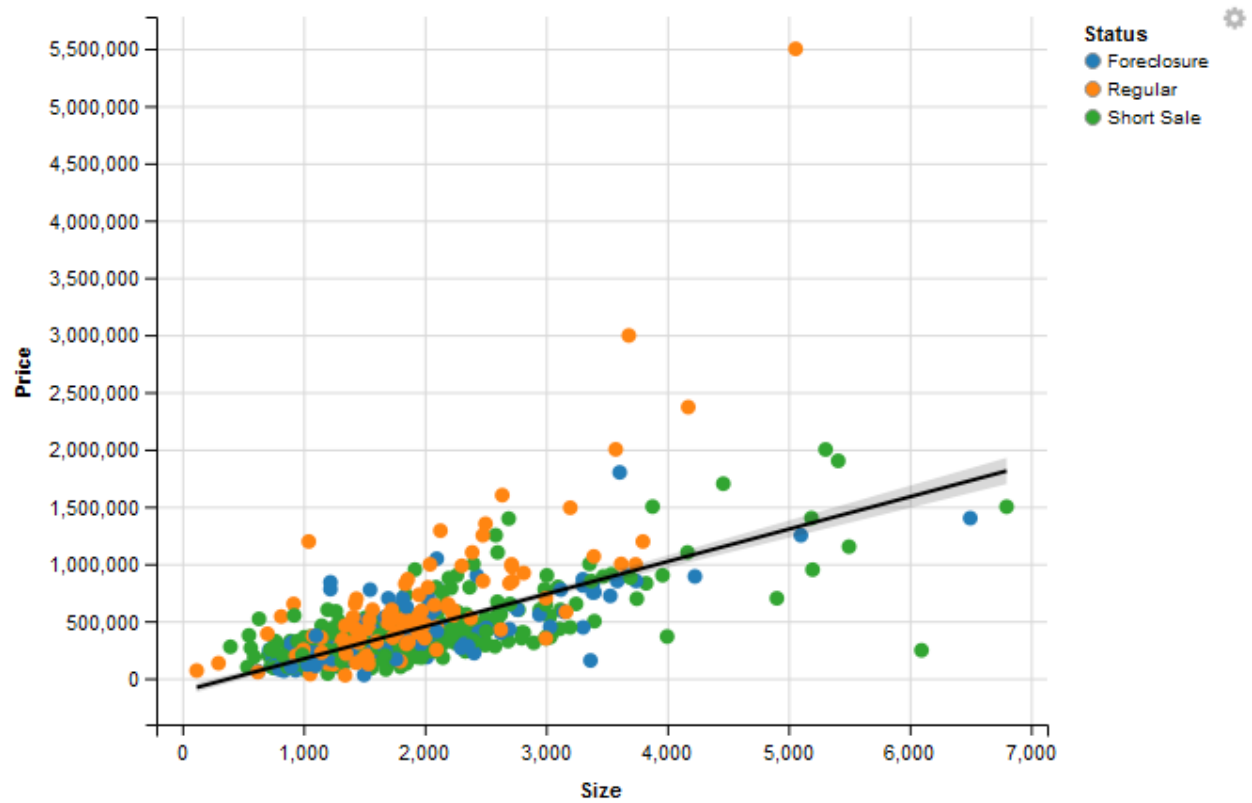
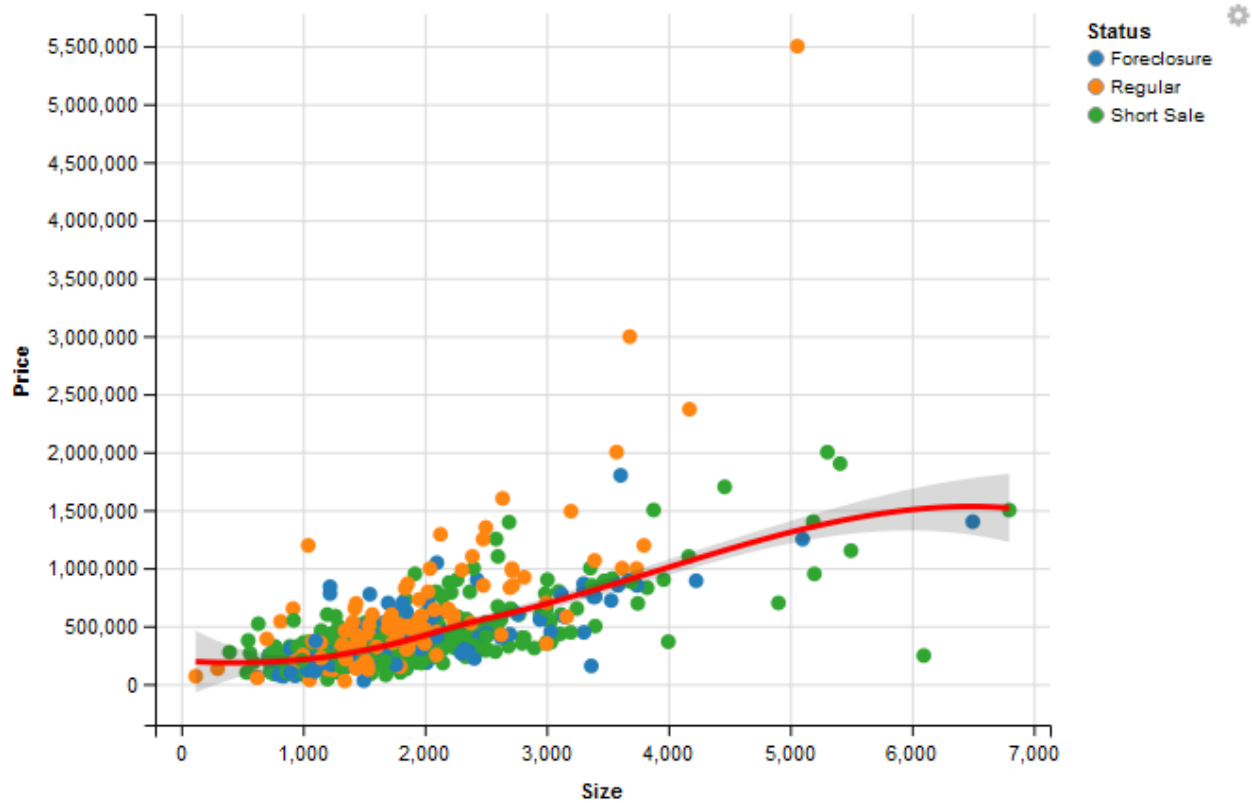


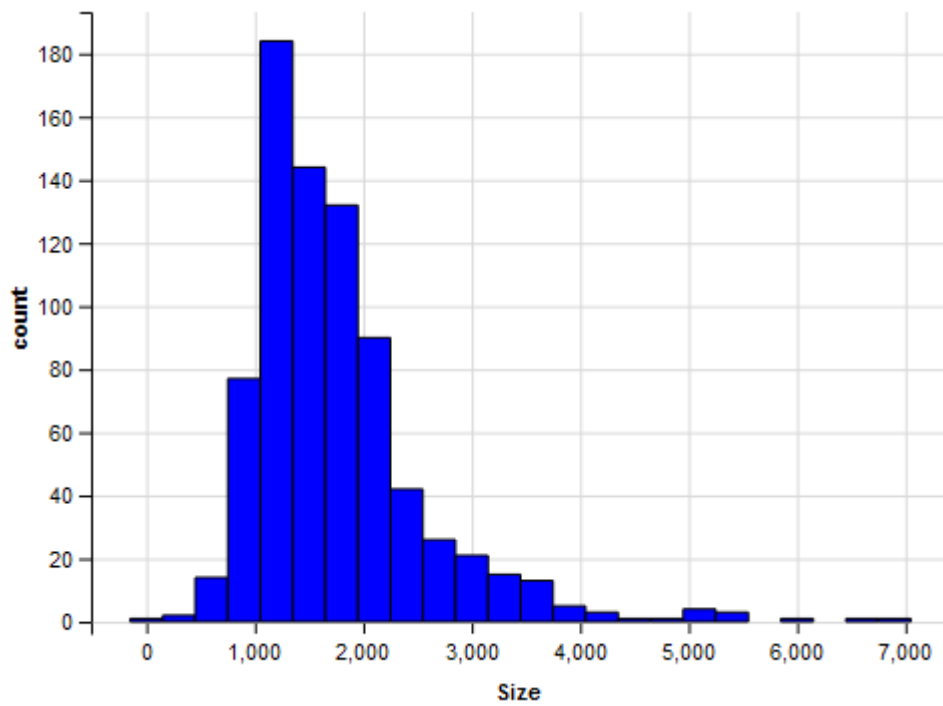
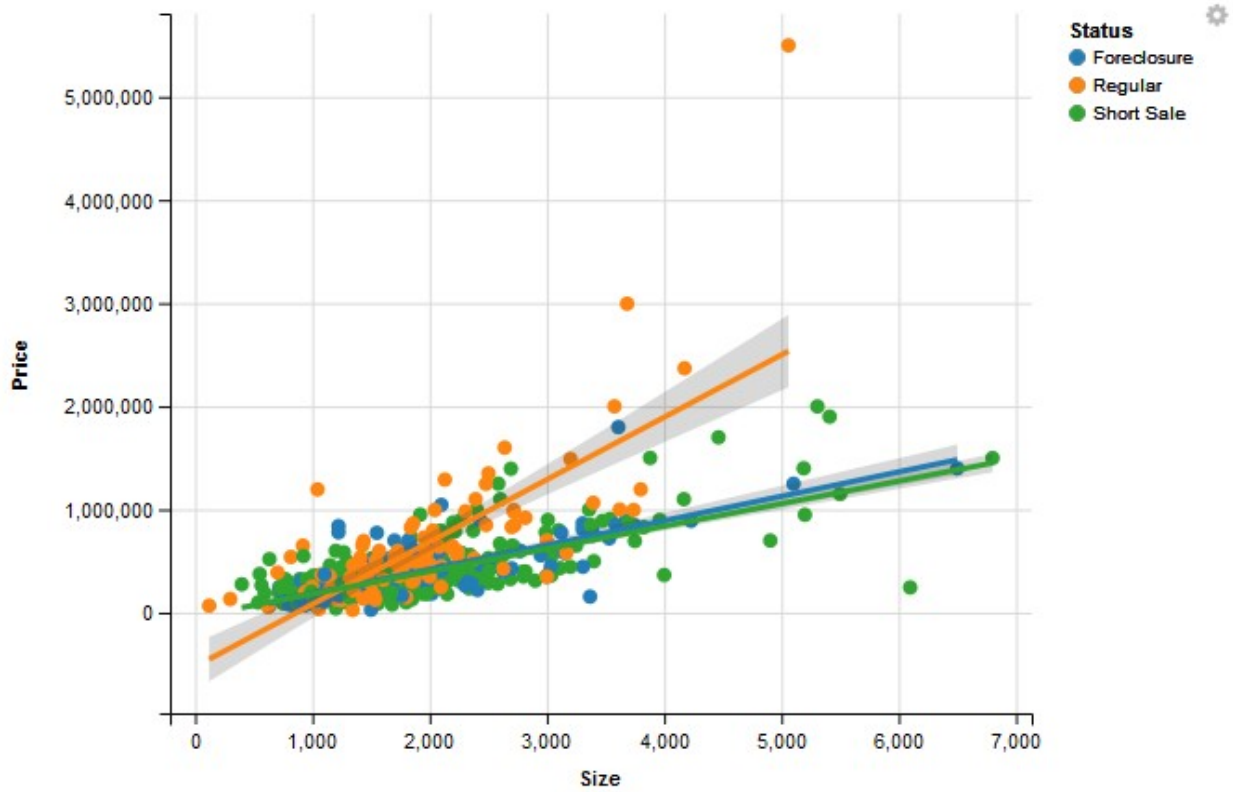
Color

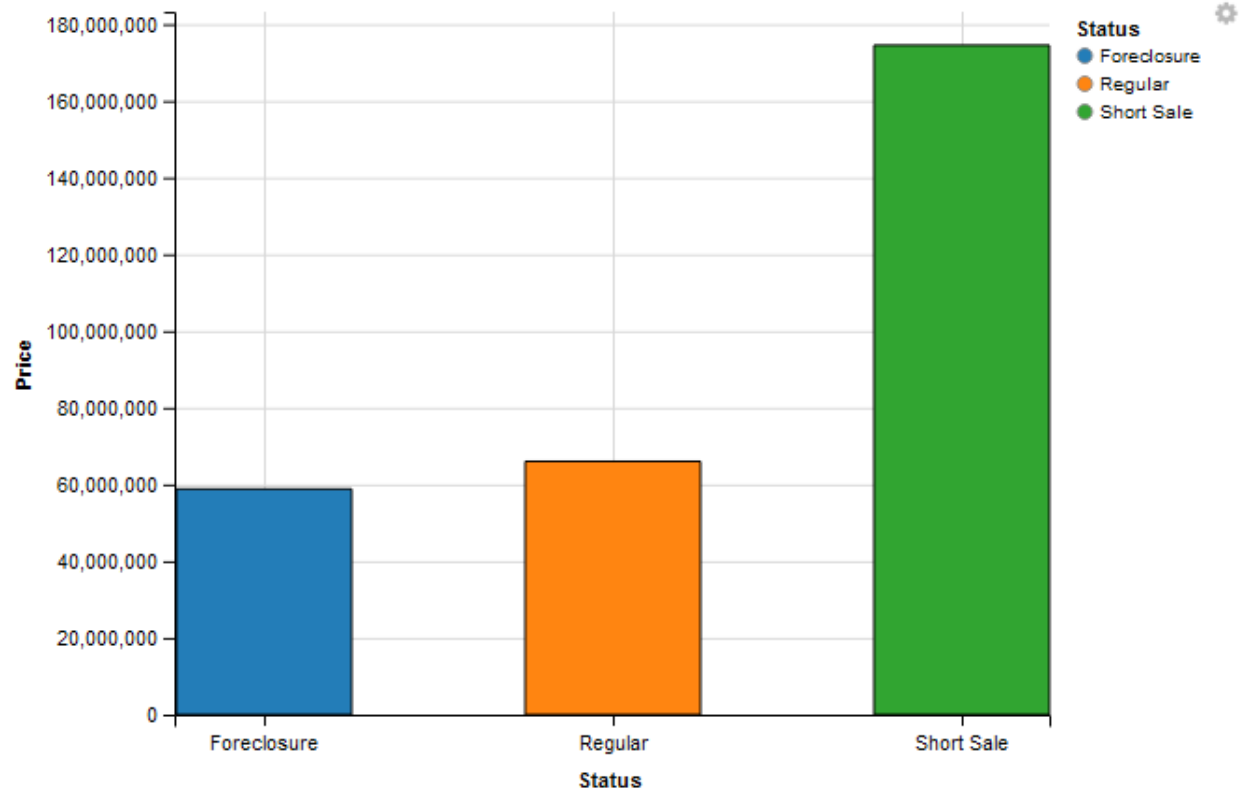
blue

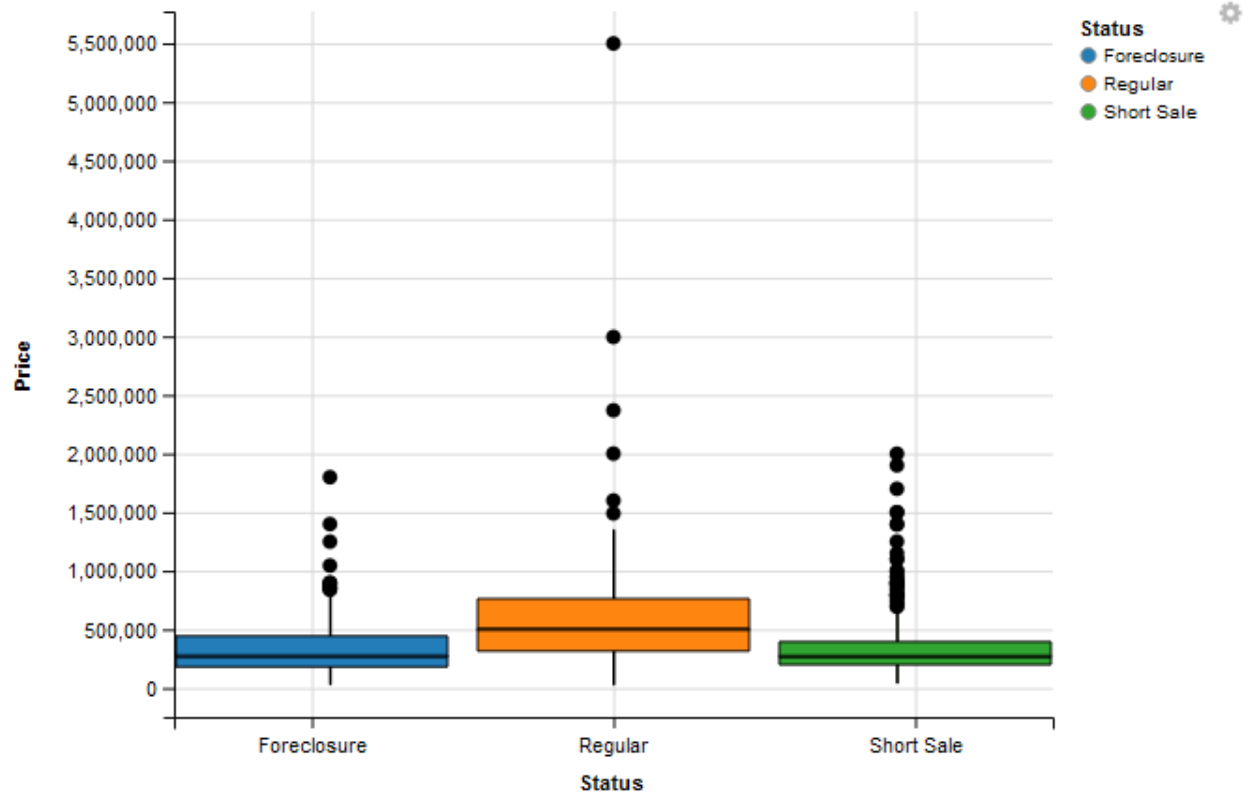


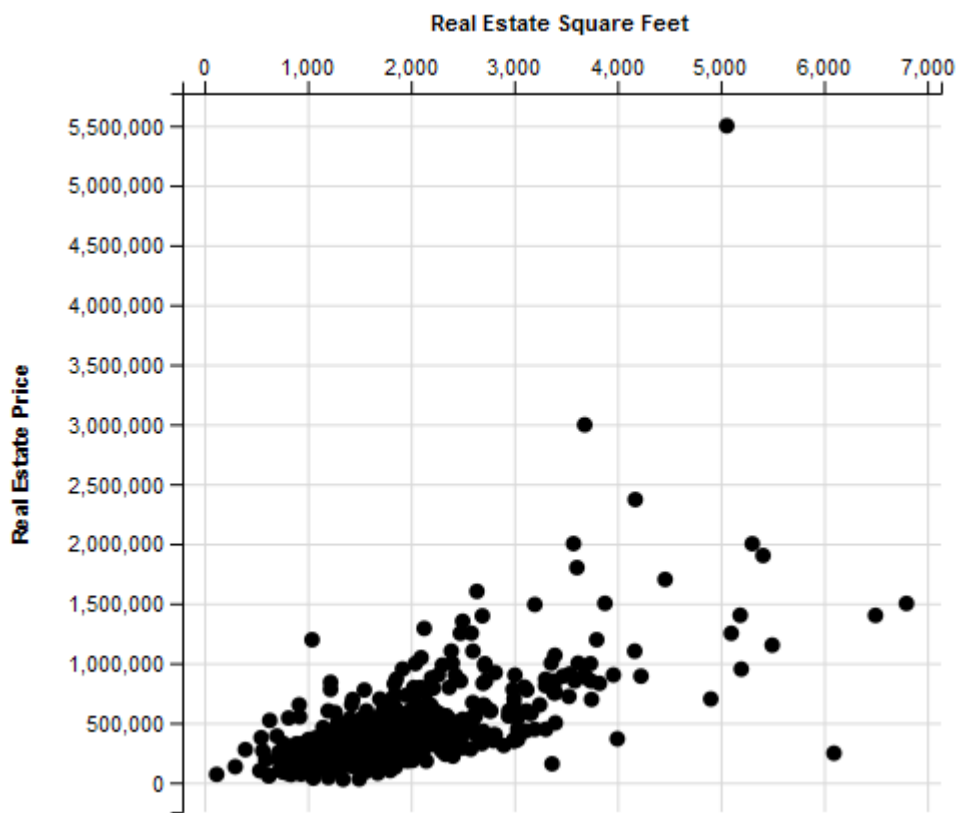
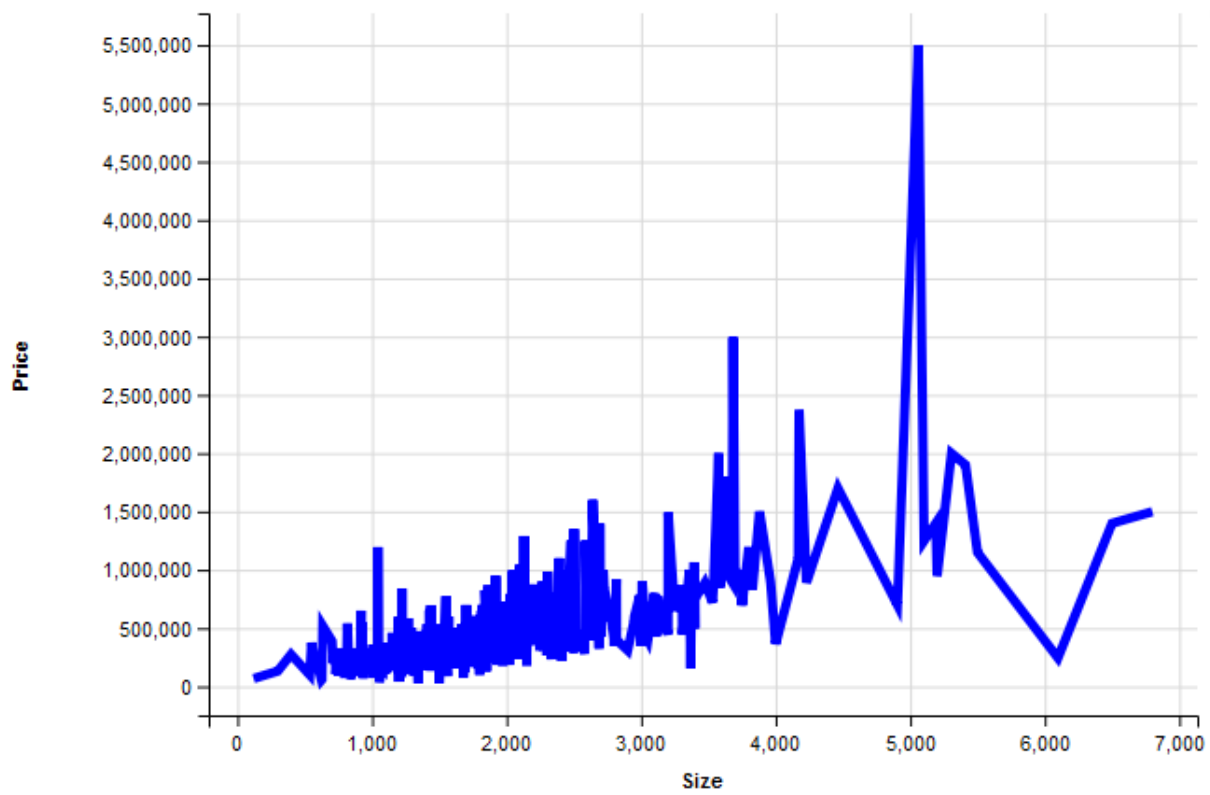


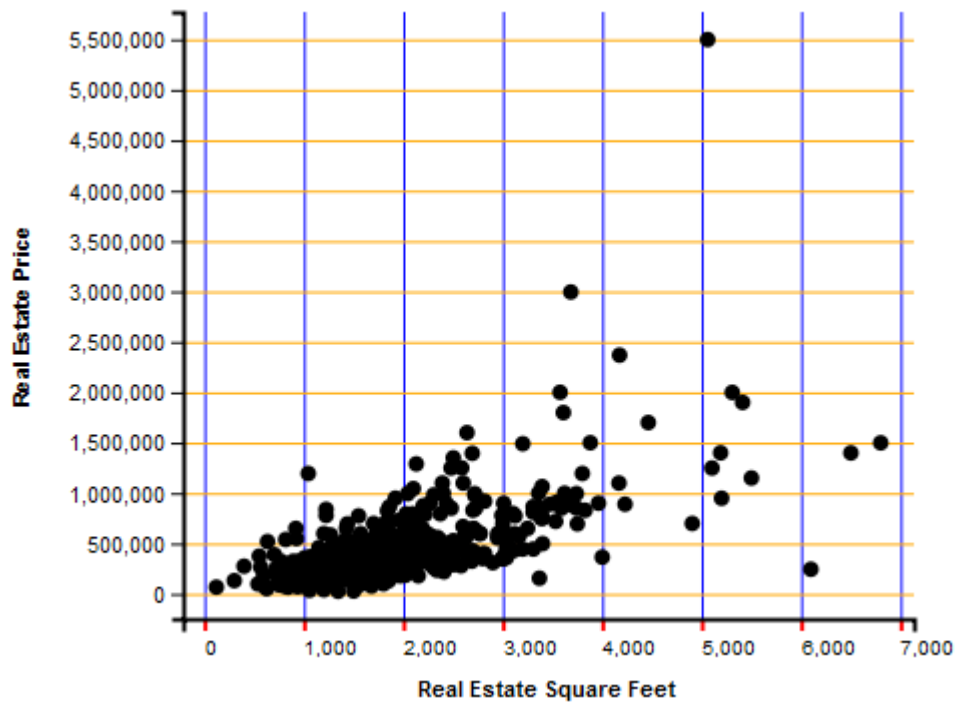
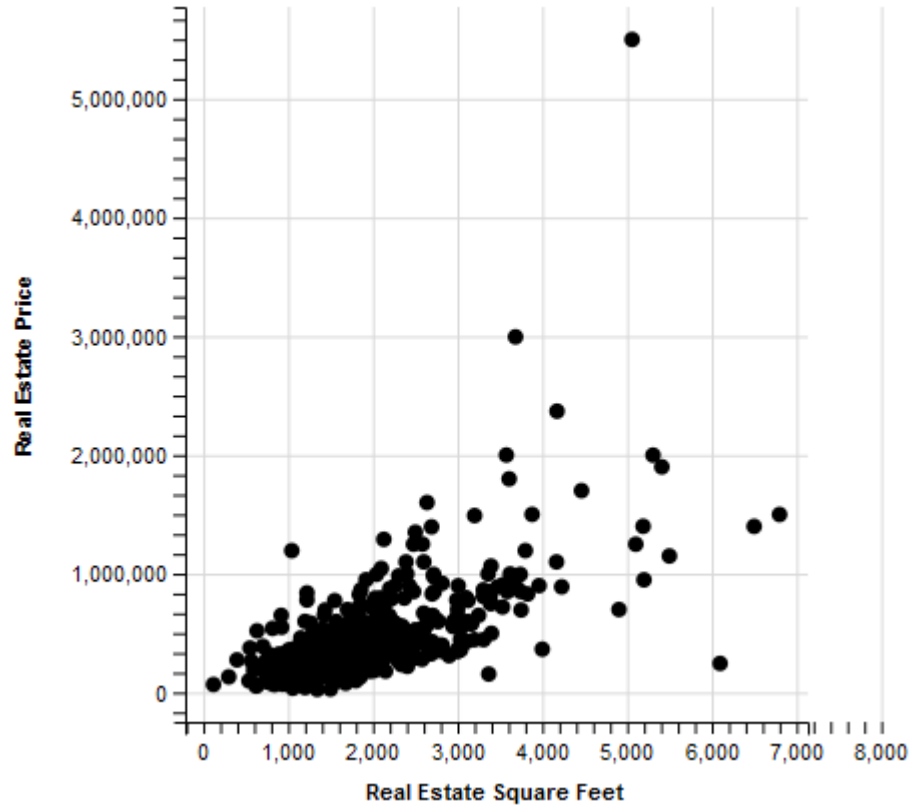


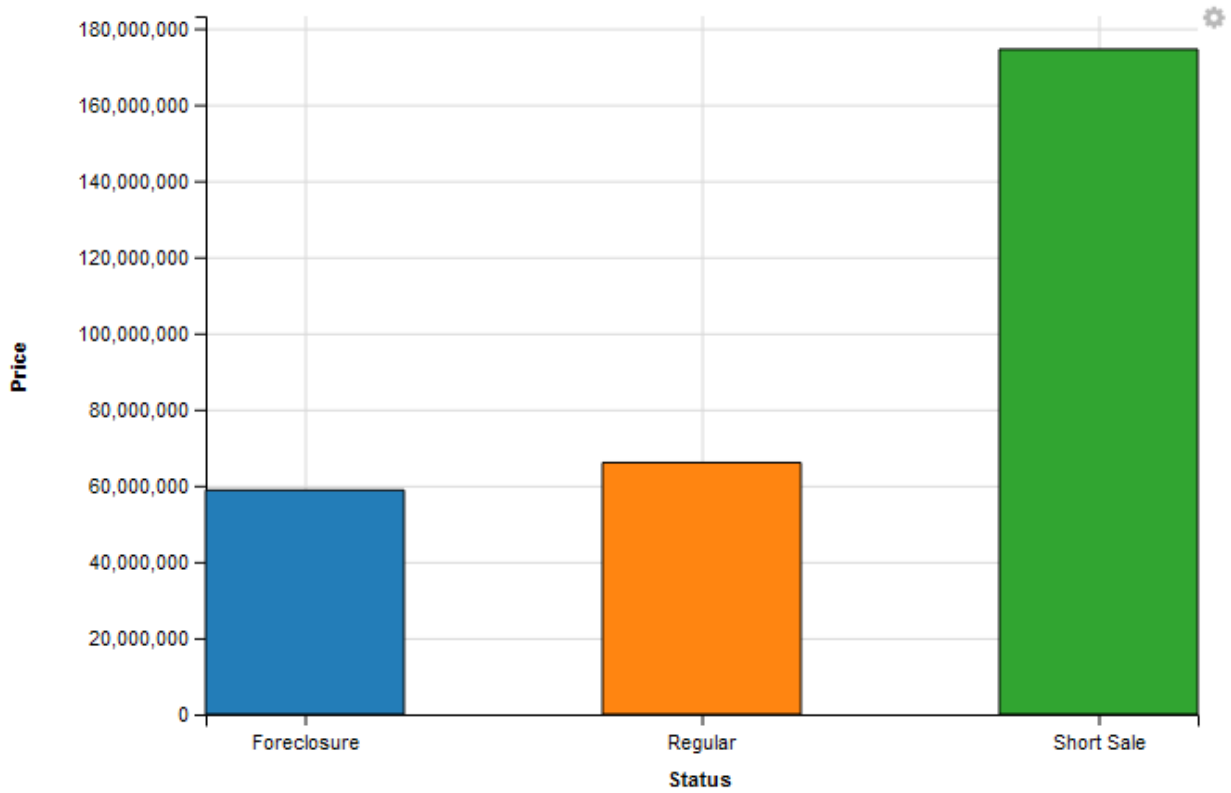
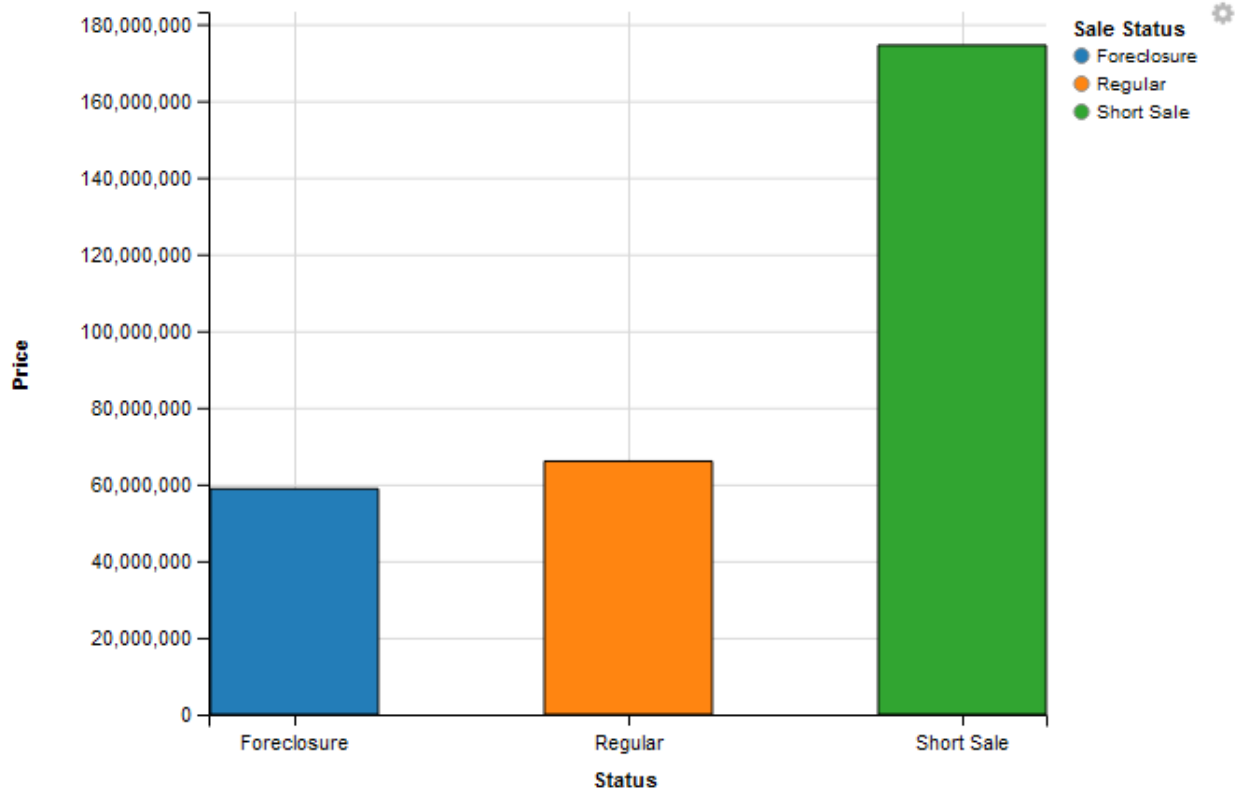


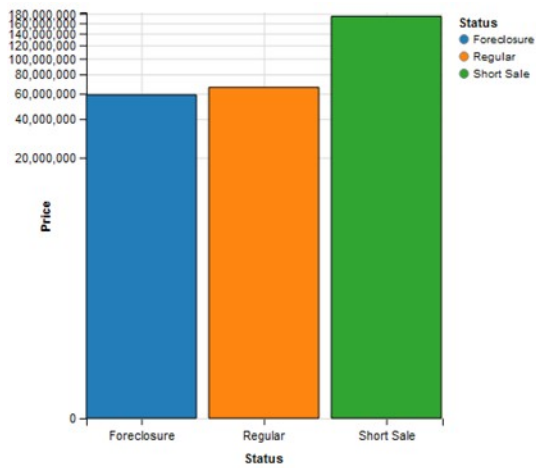
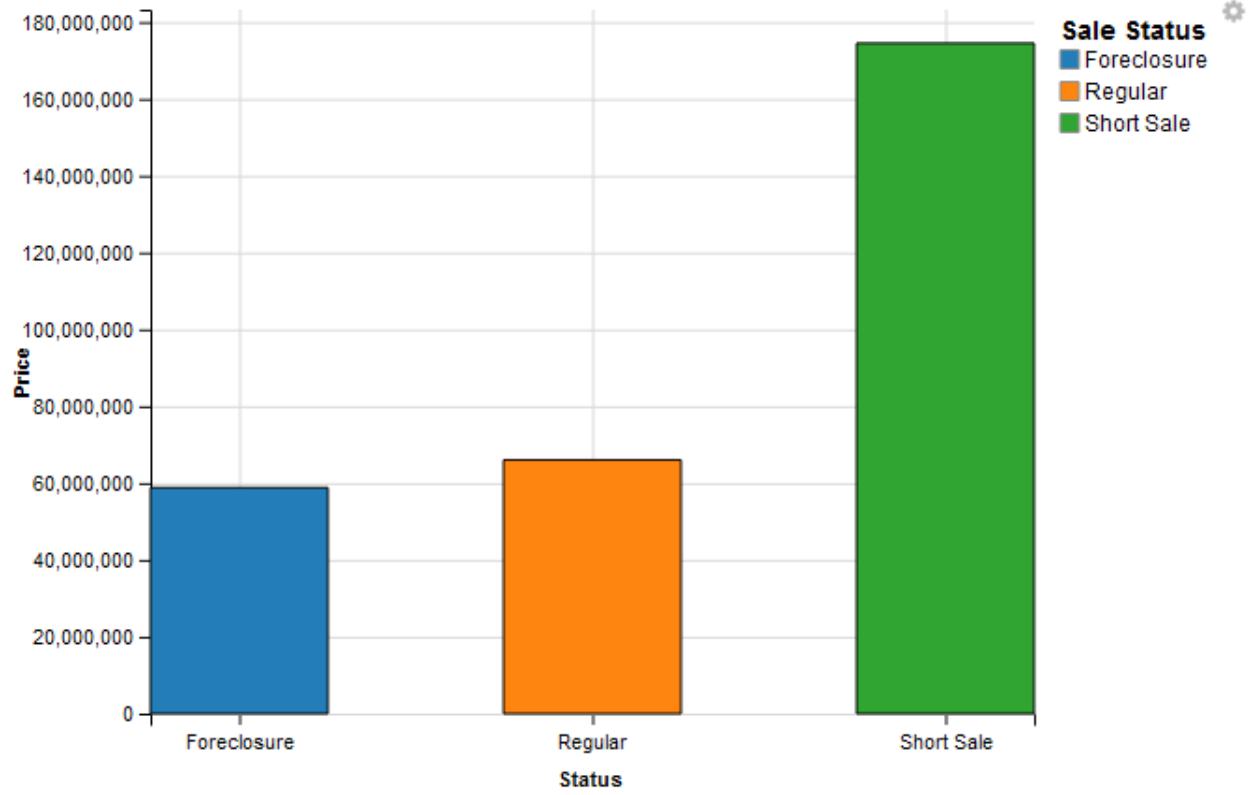


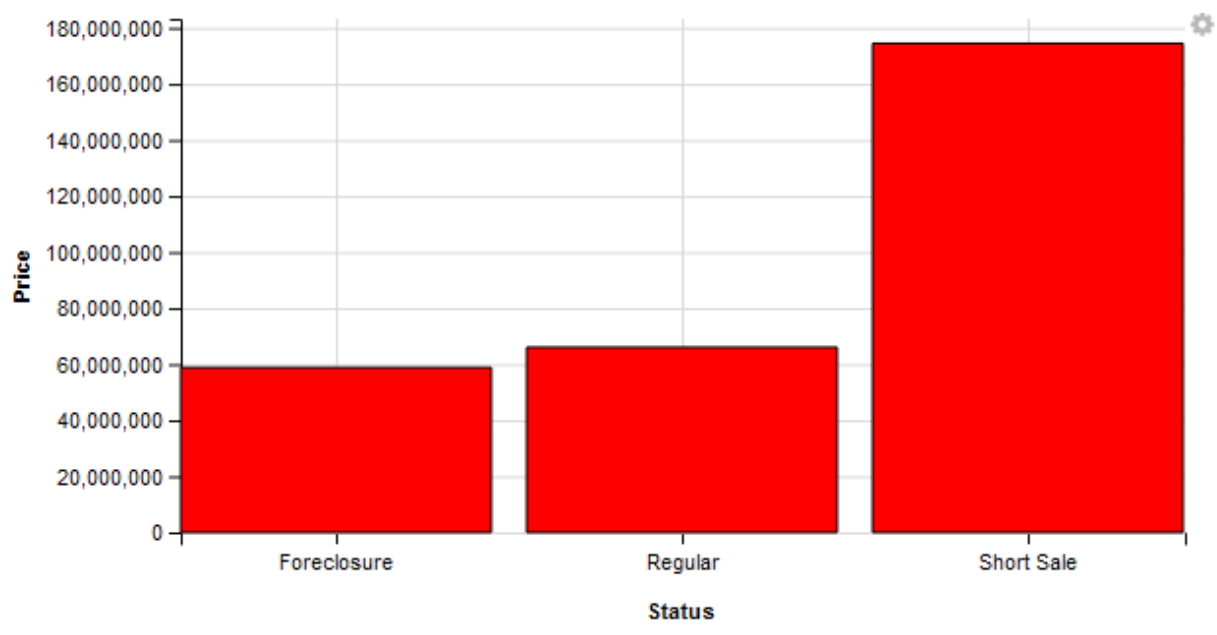
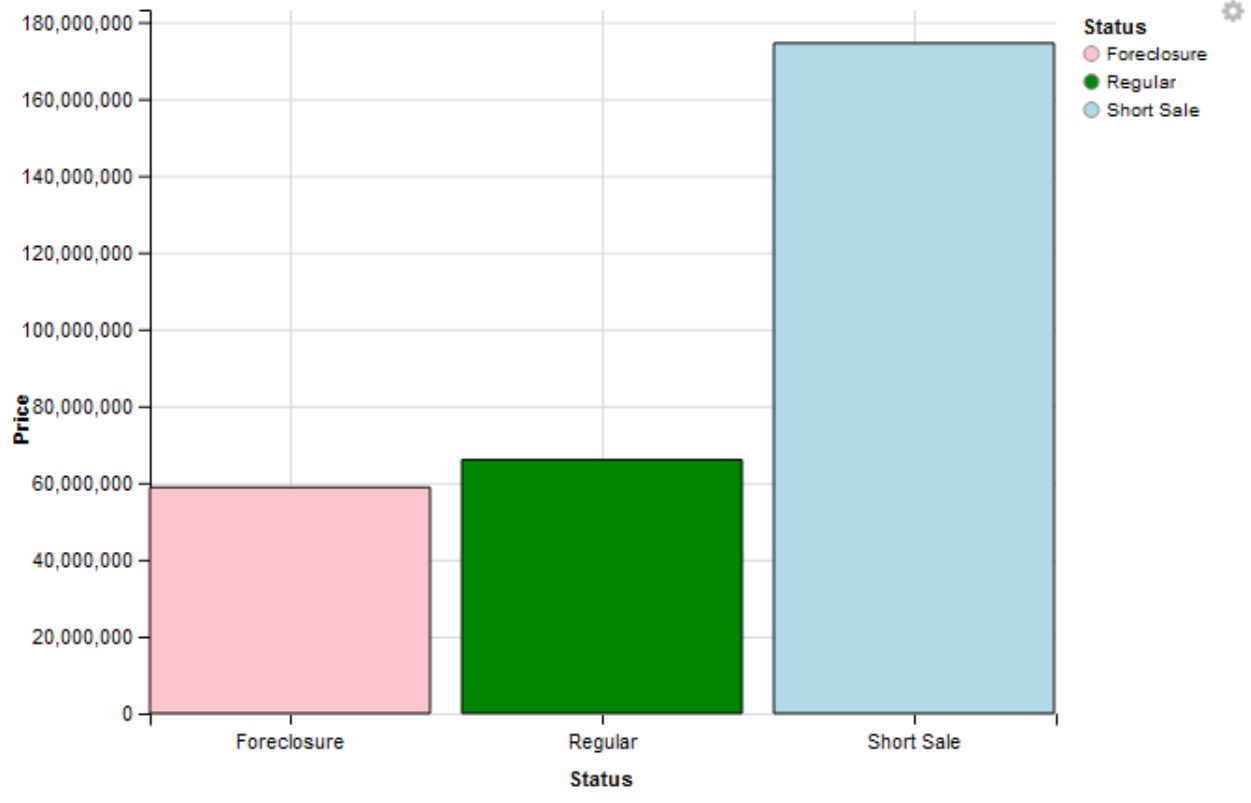






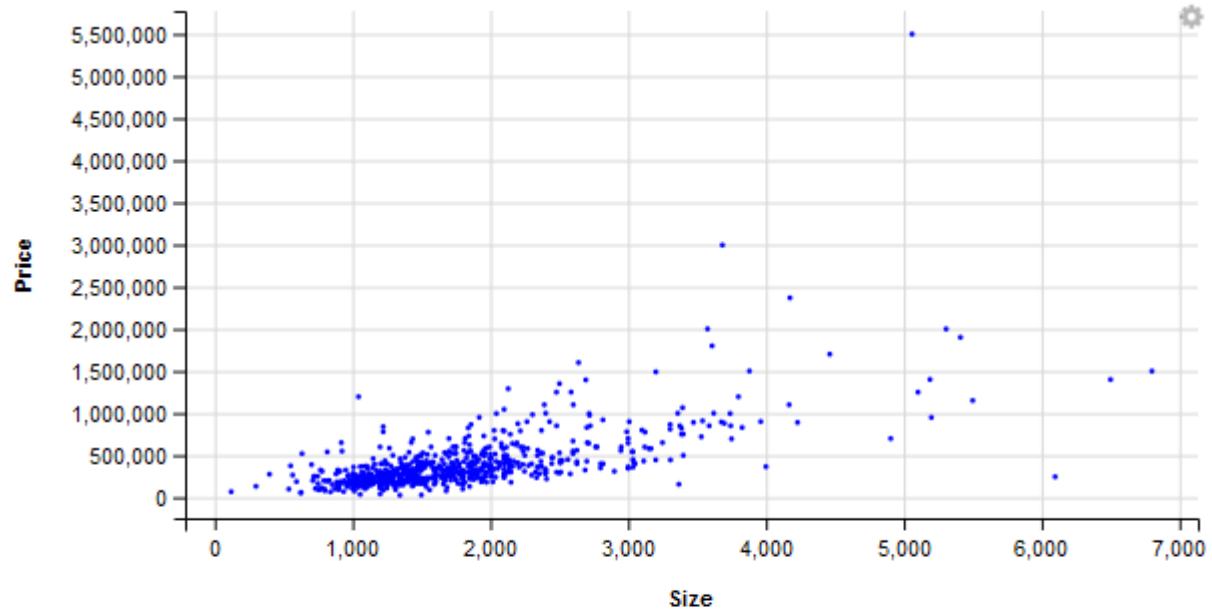






Fill Color

red

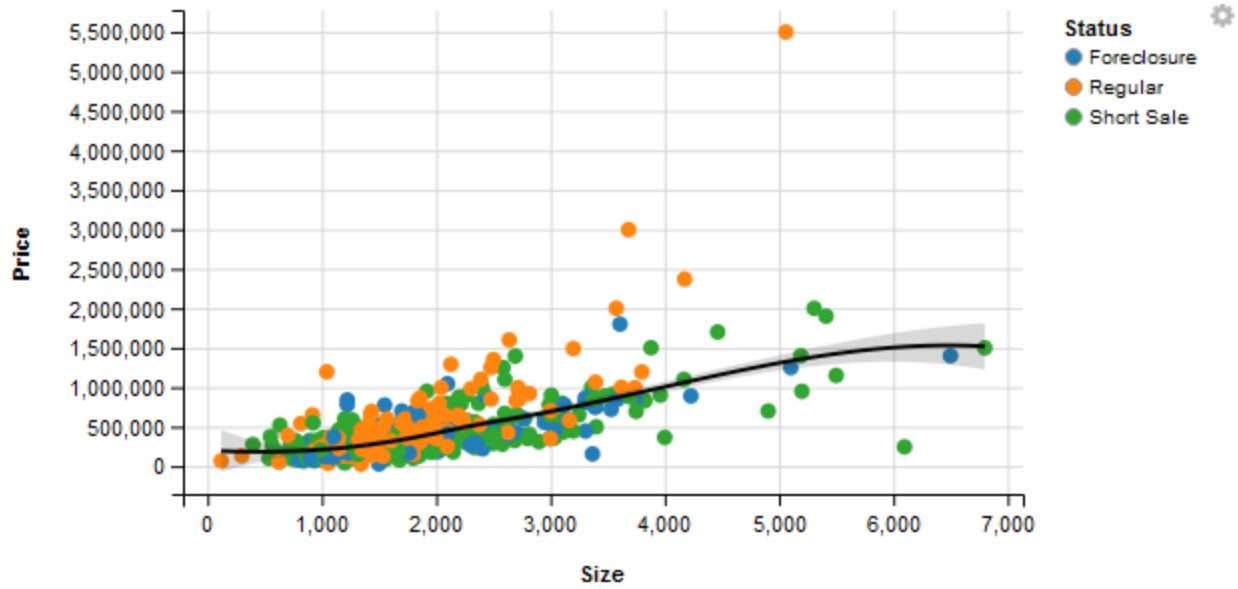


Fill Color

blue

1 6 10

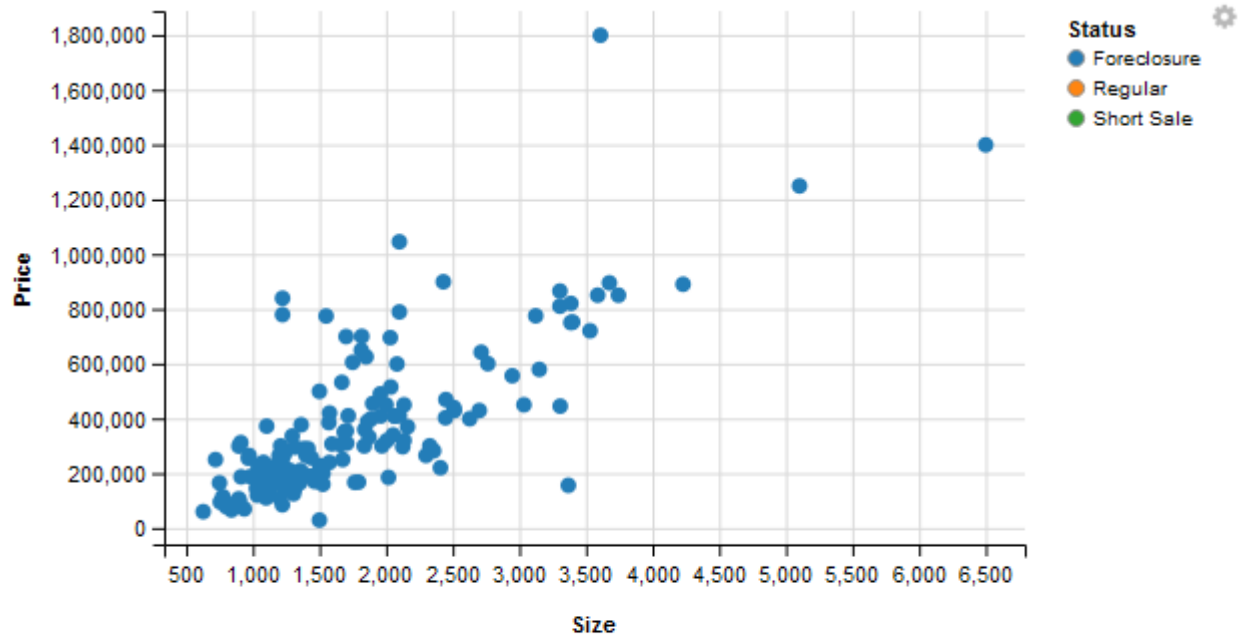
1 2 3 4 5 6 7 8 9 10



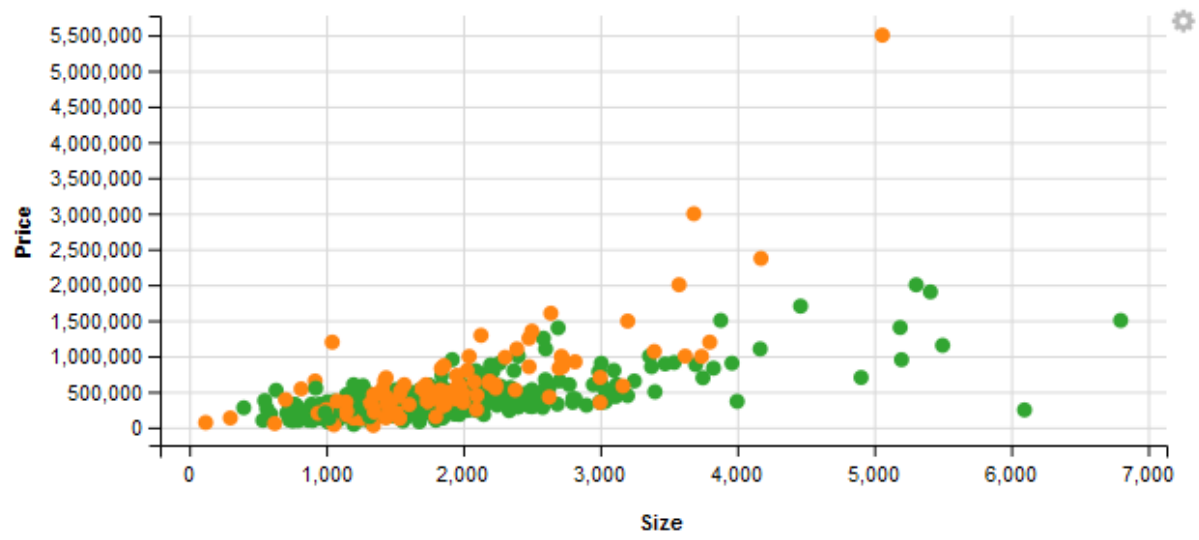
Model type

loess

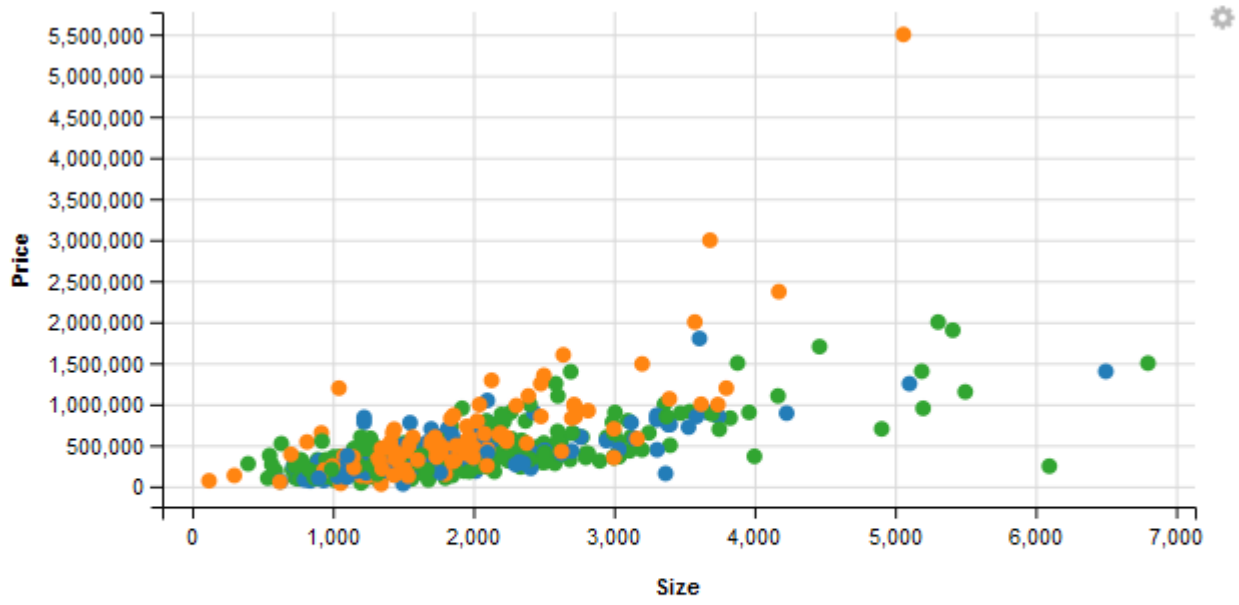
Linear



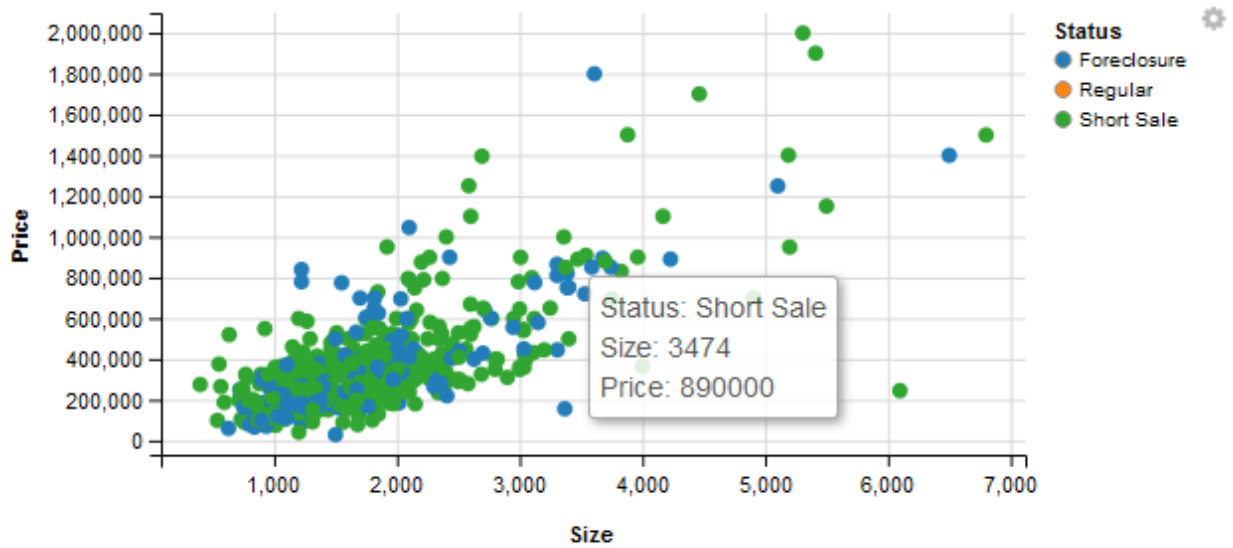
Foreclosure



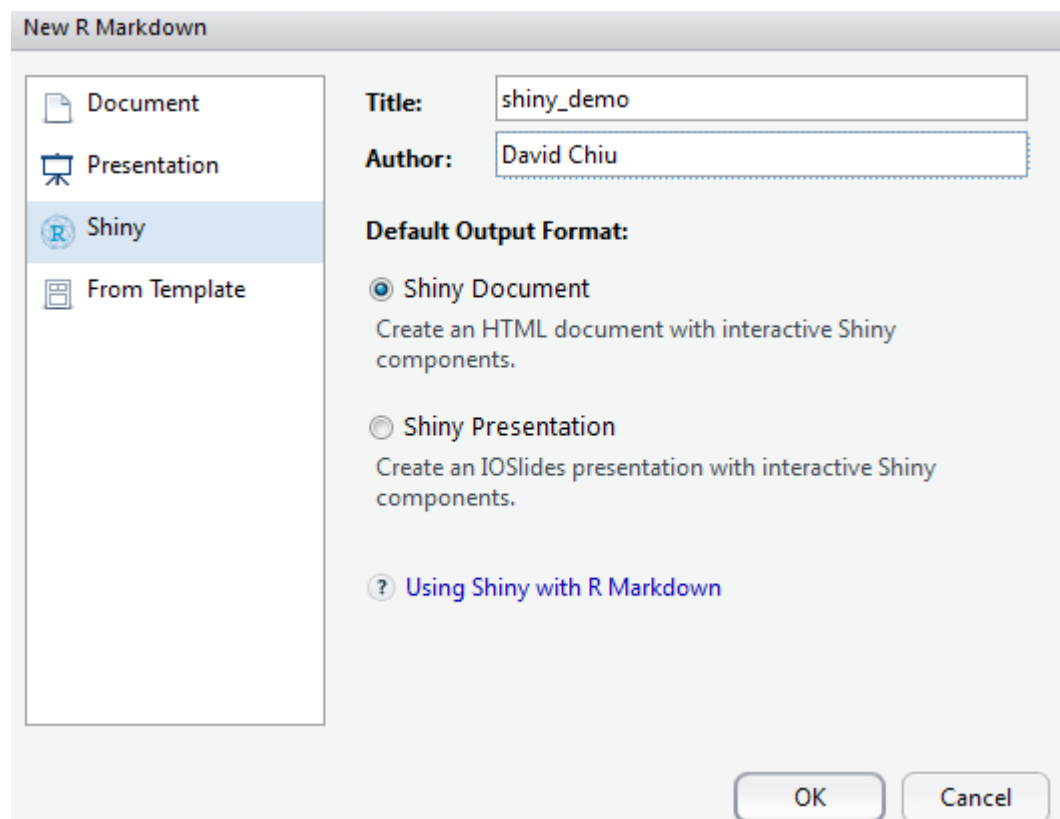
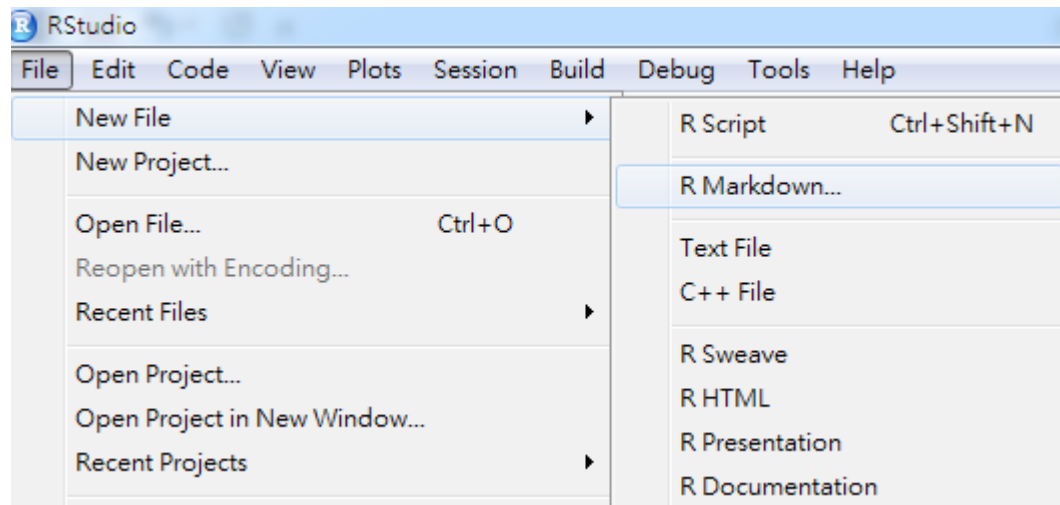
- Short Sale
- Foreclosure
- Regular



Size
 Price



Short Sale
 Foreclosure
 Regular



```
1 ---
2 title: "shiny_demo"
3 author: "David Chiu"
4 date: "2016年2月28日"
5 output: html_document
6 runtime: shiny
7 ---
8 ```{r, include=TRUE, warning=FALSE, echo=FALSE}
9 library(ggvis)
10 library(dplyr)
11 ```
12
13 ```{r, warning=FALSE}
14 house <- read.csv('RealEstate.csv', header=TRUE)
15 housing_status <- as.character(unique(house$Status))
16 house %>%
17   ggvis(~Size, ~Price, fill=~Status) %>%
18   filter(Status %in% eval(input_checkboxgroup(housing_status))) %>%
```

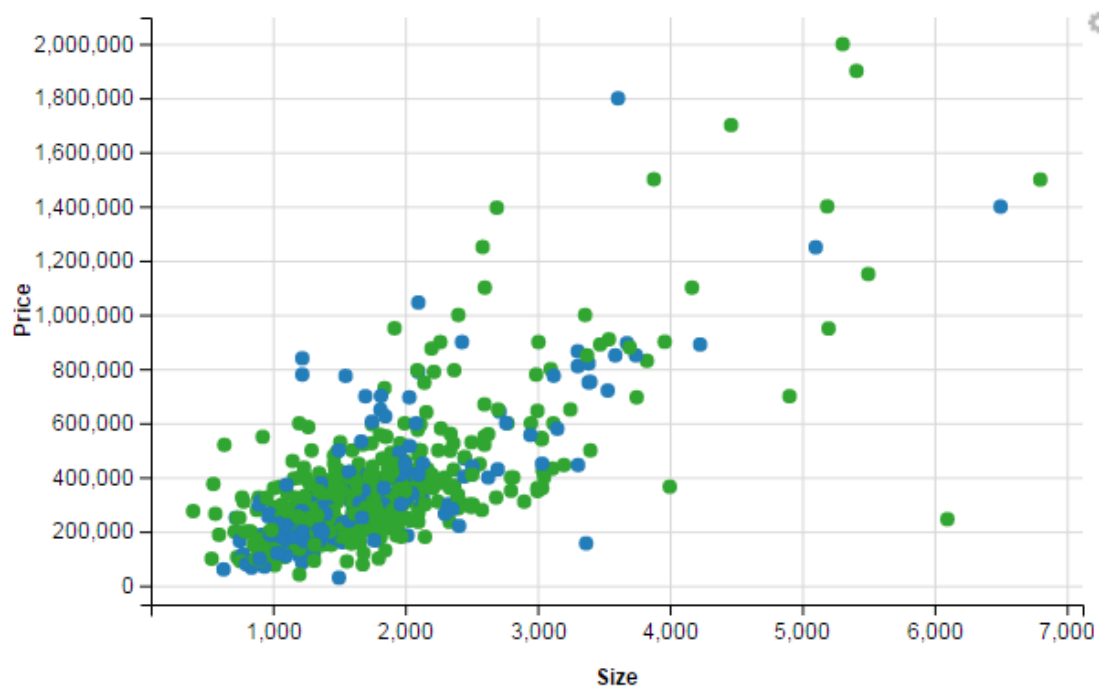
3:21 (Top Level) R Markdown

shiny_demo

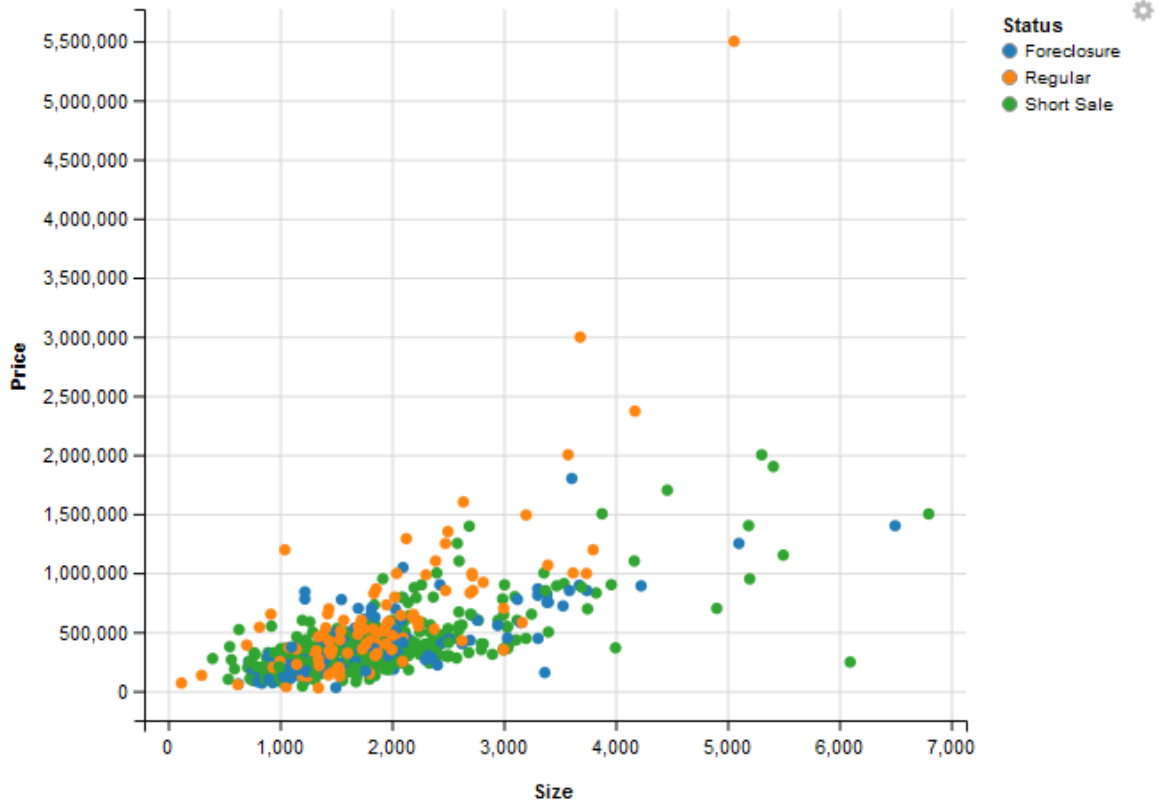
David Chiu

2016/2/28

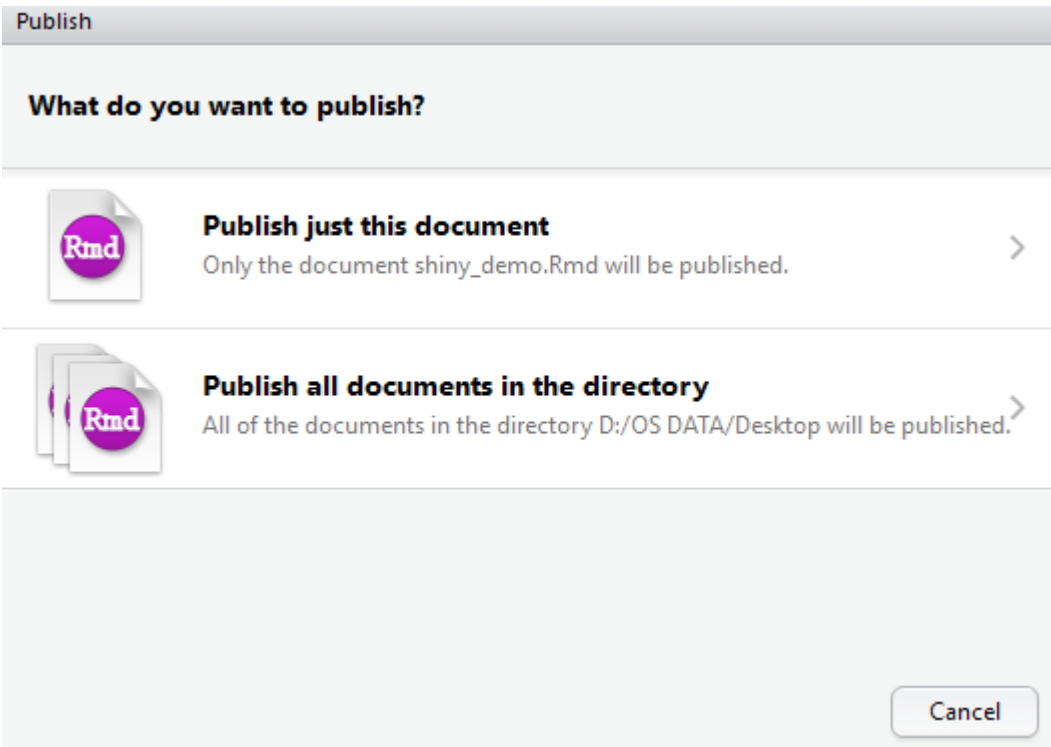
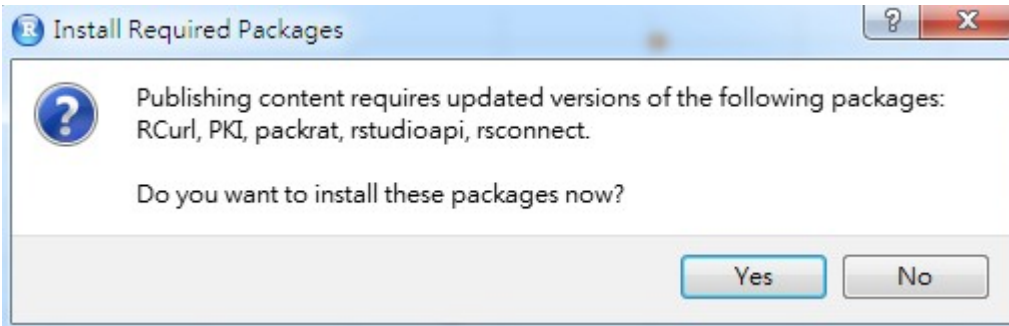
```
house <- read.csv('RealEstate.csv', header=TRUE)
loc <- as.character(unique(house$Status))
house %>%
  ggvis(~Size, ~Price, fill=~Status) %>%
  filter(Status %in% eval(input_checkboxgroup(loc)) ) %>%
  layer_points() %>% hide_legend("fill") %>%
  add_axis("x", title = "Size", title_offset = 40) %>%
  add_axis("y", title = "Price", title_offset = 70)
```

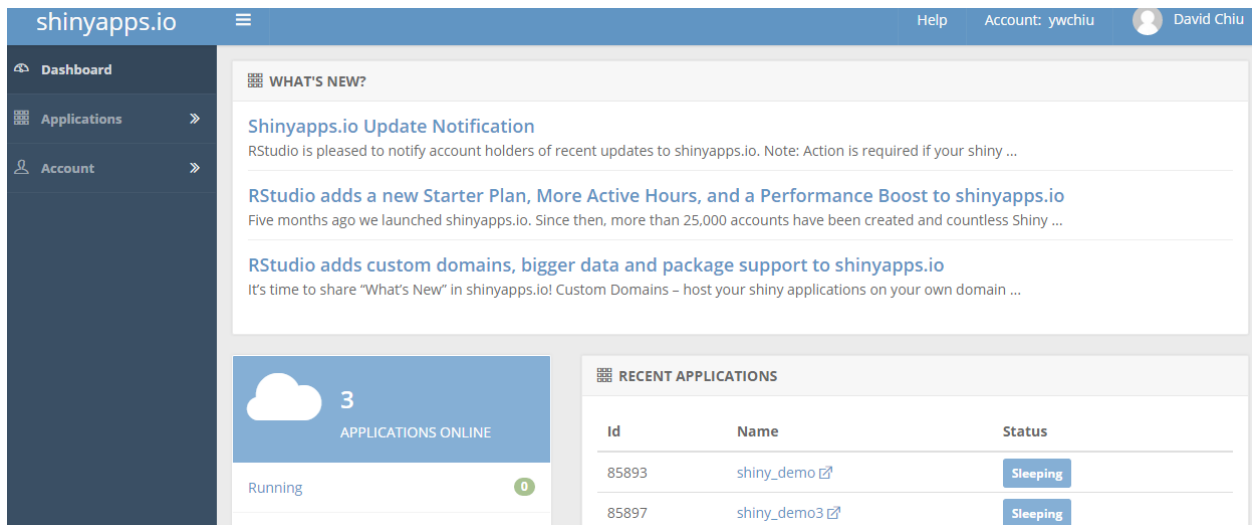
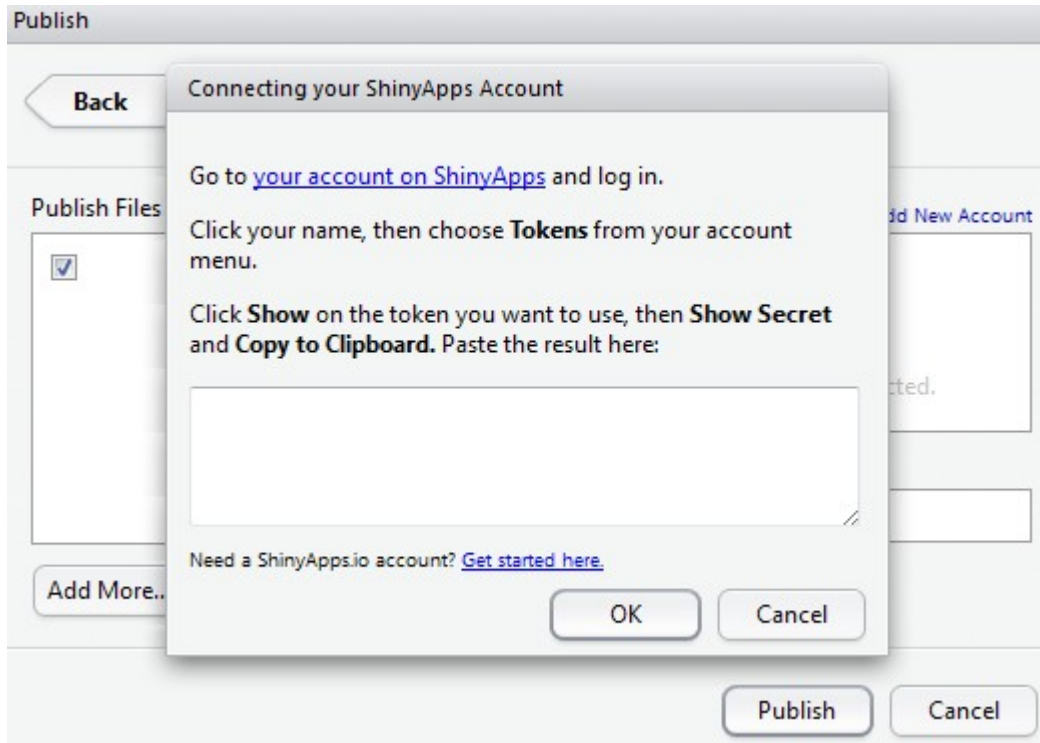


Point Size:



```
shiny_demo.Rmd x
Run Document
Run Chunks
1 ---
2 title: "shiny_demo"
3 author: "David chiu"
4 date: "2016年2月28日"
5 output: html_document
6 runtime: shiny
7 ---
8 {r, include=TRUE, warning=FALSE, echo=FALSE}
9 library(ggvis)
10 library(dplyr)
11
12
12:1 (Top Level) R Markdown
```





The `shinyapps` package must be authorized to your account using a token and secret. To do this, click the copy button below and we'll copy the whole command you need to your clipboard. Just paste it into your console to authorize your account. Once you've entered the command successfully in R, that computer is now authorized to deploy applications to your shinyapps.io account.

```
rconnect::setAccountInfo(name='ywchiu',
  token='414783D23372B25A9E1C573B1A42113F',
  secret='<SECRET>')
```

Show secret

Copy to clipboard

OK

Connecting your ShinyApps Account

Go to [your account on ShinyApps](#) and log in.

Click your name, then choose **Tokens** from your account menu.

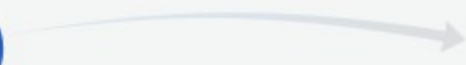
Click **Show** on the token you want to use, then **Show Secret** and **Copy to Clipboard**. Paste the result here:

```
rsconnect::setAccountInfo(name='ywchiu',  
token='414783D23372B25A9E1C573B1A42113F',  
secret='<SECRET>')
```

Need a ShinyApps.io account? [Get started here](#).

OK Cancel

Publish to Server



Publish Files From: ~

- shiny_demo.Rmd
- RealEstate.csv

Add More...

Launch browser

Destination Account:

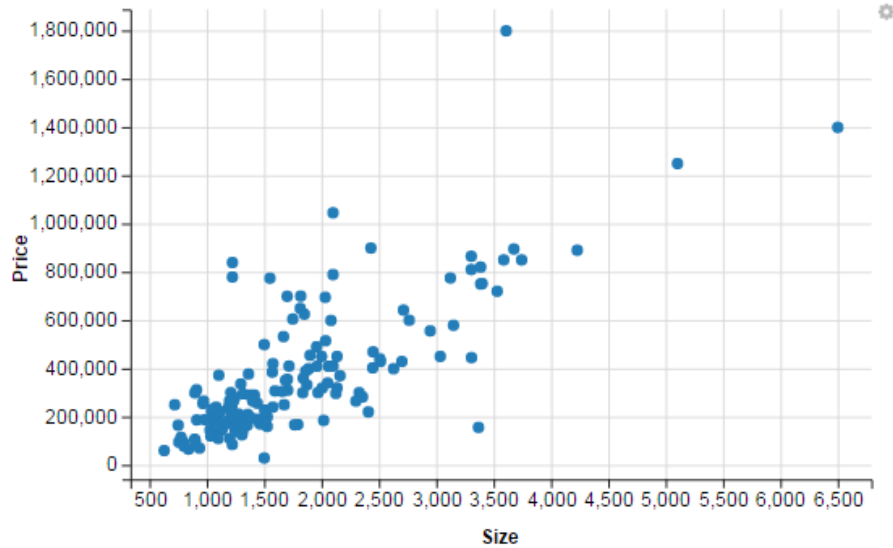
ywchiu: shinyapps.io

Update: [Create New](#)

shiny_demo
https://ywchiu.shinyapps.io/shiny_de...

Publish Cancel

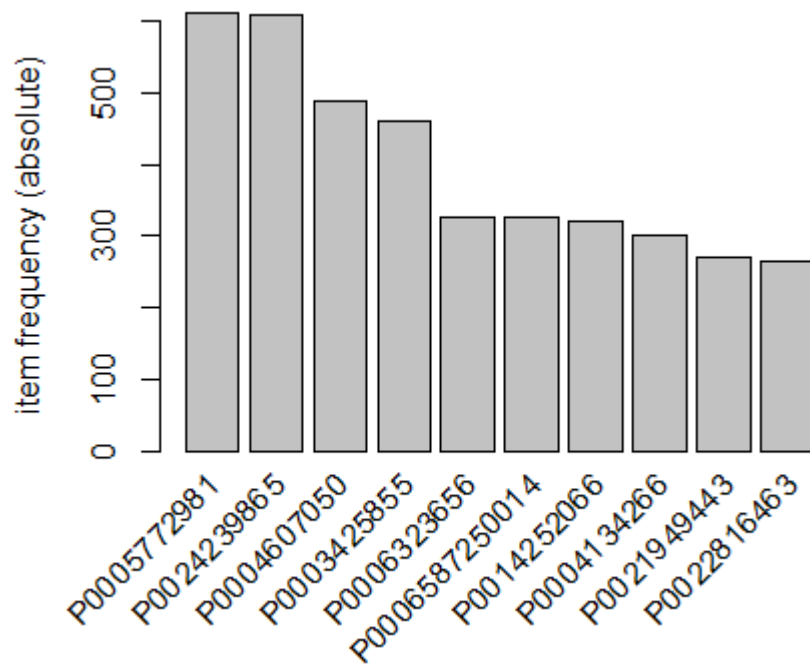
```
house <- read.csv('RealEstate.csv', header=TRUE)
loc <- as.character(unique(house$Status))
house %>%
  ggvis(~Size, ~Price, fill=~Status) %>%
  filter(Status %in% eval(input_checkboxgroup(loc)) ) %>%
  layer_points() %>% hide_legend("fill") %>%
  add_axis("x", title = "Size", title_offset = 40) %>%
  add_axis("y", title = "Price", title_offset = 70)
```



- Short Sale
- Foreclosure
- Regular

Id	Name	Status	Instances	Deployed Date	Created Date	
85893	shiny_demo ↗	Running	1	Jul 12, 2016	Feb 28, 2016	⚙ 🔄 🗑 🗑
85897	shiny_demo3 ↗	Sleeping	1	Feb 28, 2016	Feb 28, 2016	⚙ 🔄 🗑 🗑
85889	shiny_demo2 ↗	Undeployed	0		Feb 28, 2016	⚙ 🔄 🗑 🗑
88750	test ↗	Undeployed	0		Mar 14, 2016	⚙ 🔄 🗑 🗑

Chapter 9: Rule and Pattern Mining with R



TID	Items
100	A C D
200	B C E
300	A B C E
400	B E

Database



Itemset	Support
A	2
B	3
C	3
E	3

Candidate 1



Itemset	Support
{A B}	1
{A C}	2
{A E}	1
{B C}	2
{B E}	3
{C E}	2

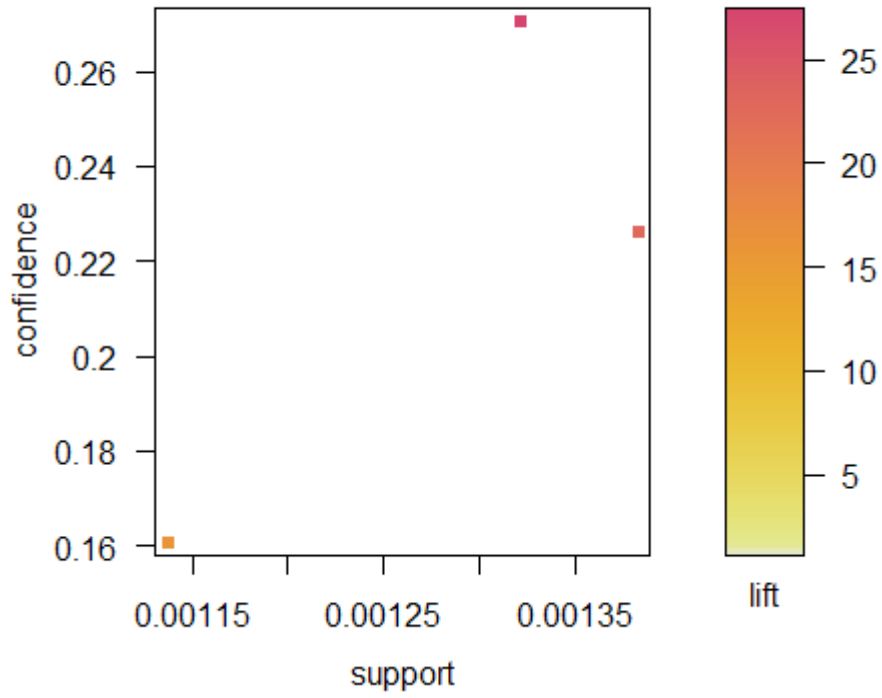
Candidate 2



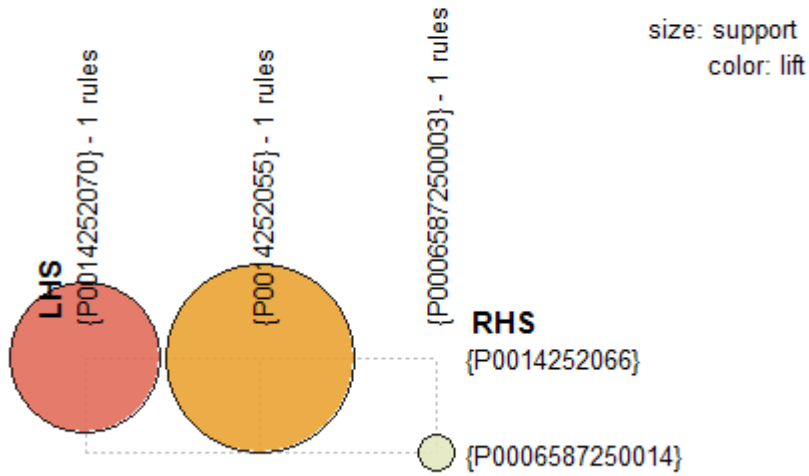
Itemset	Support
{B C E}	2

Candidate 3

Scatter plot for 3 rules

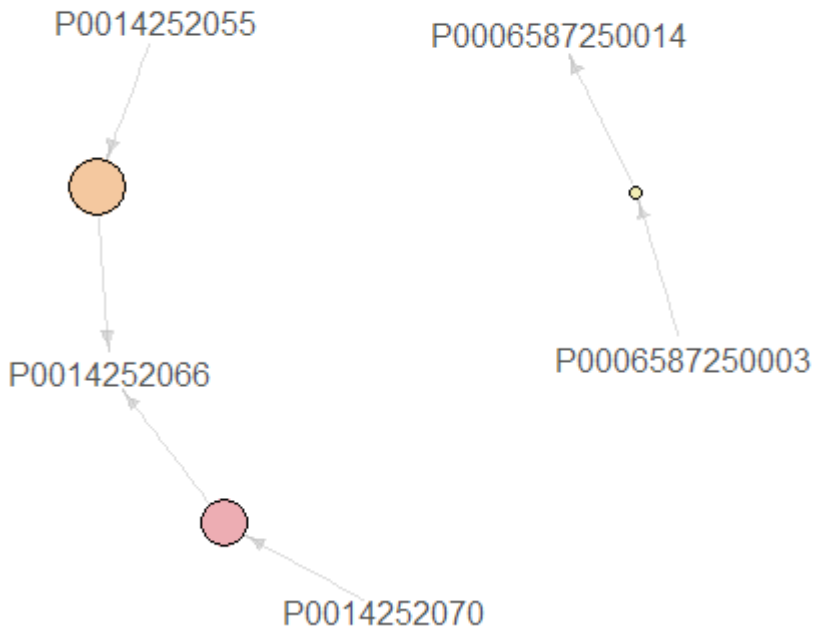


Grouped matrix for 3 rules

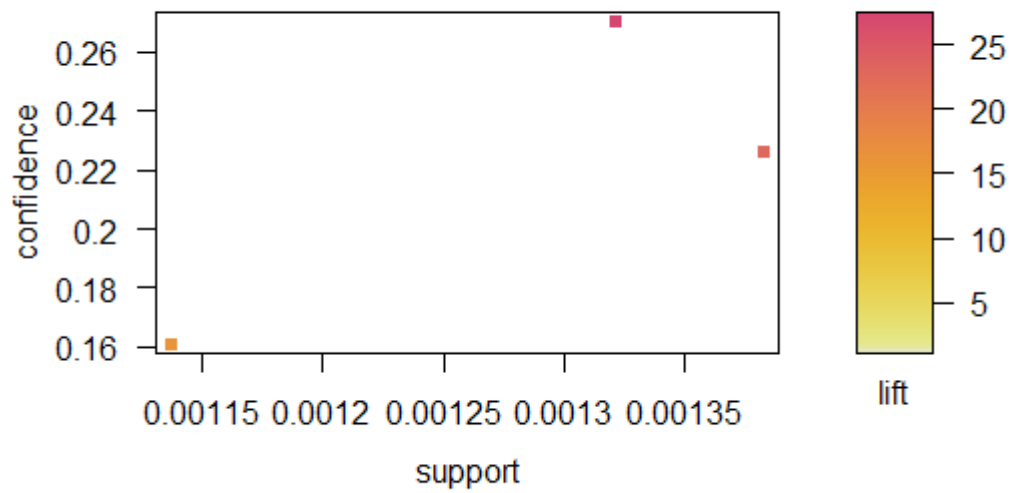


Graph for 3 rules

size: support (0.001 - 0.001)
color: lift (16.008 - 27.329)



Scatter plot for 3 rules



inspect filter zoom in zoom out end

Horizontal Data Layout

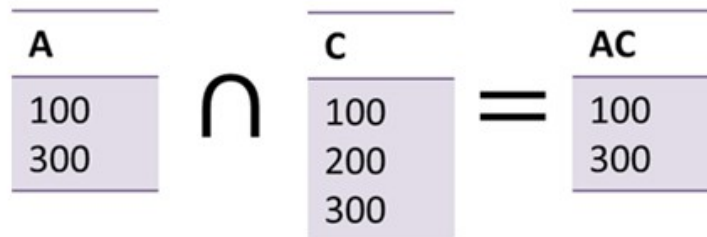
TID	Items
100	A C D
200	B C E
300	A B C E
400	B E

Vertical Data Layout

A	B	C	D	E
100	200	100	100	200
300	300	200		300
	400	300		400



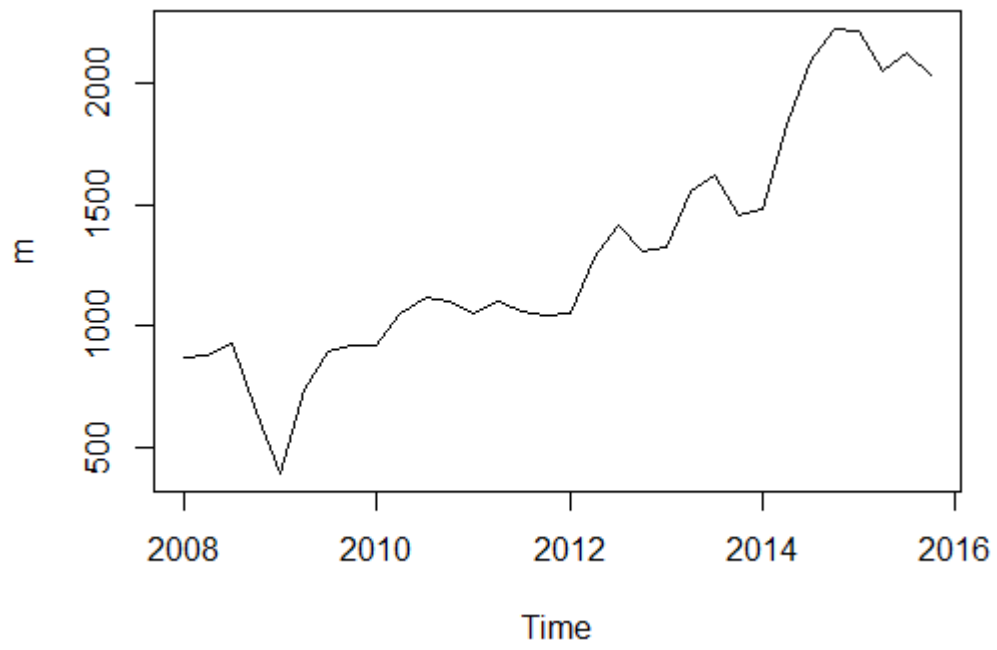
TID-list



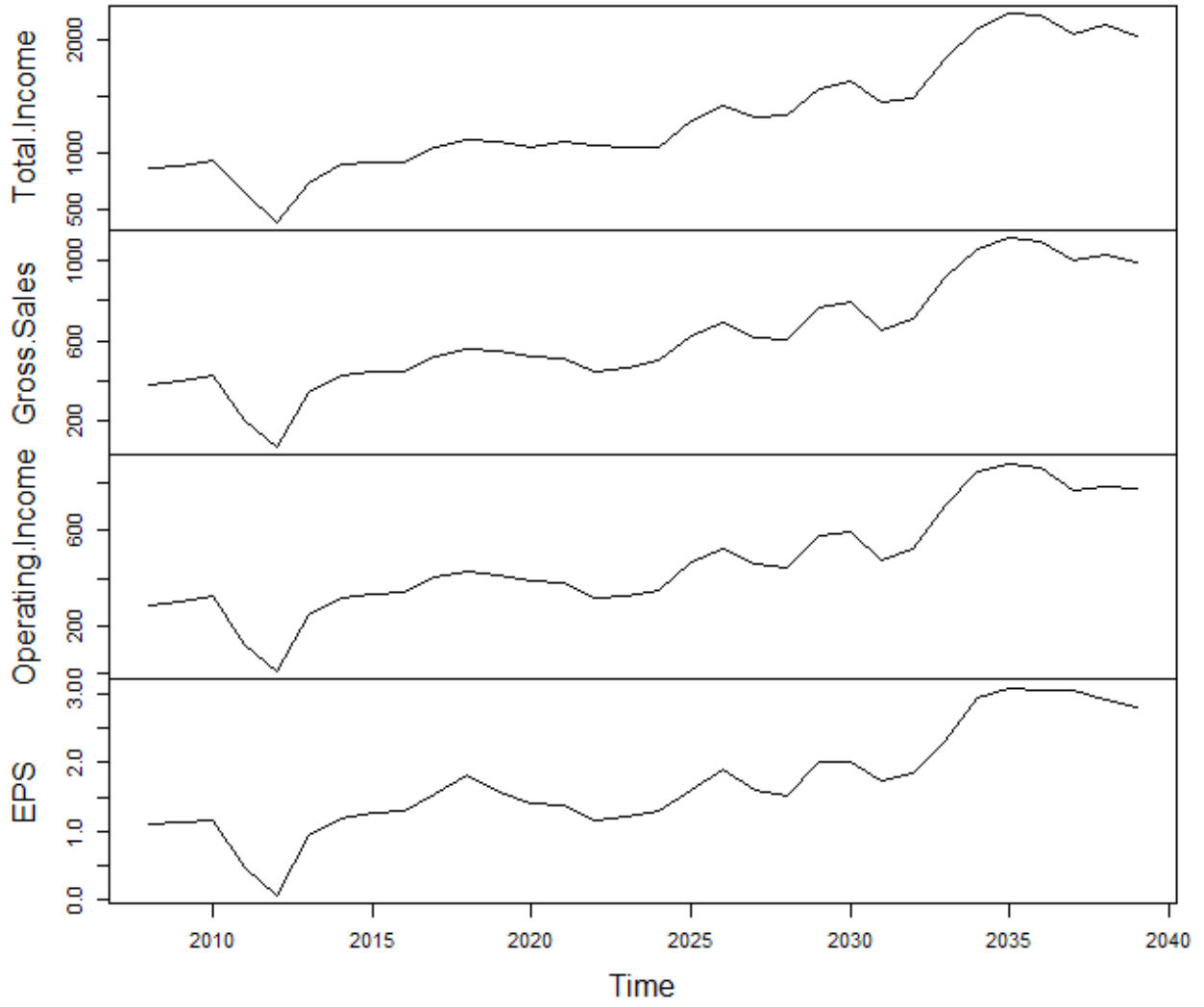
Database		
SID	EID	Items
1	100	C D
1	150	A B C
1	200	A B F
1	250	A C D F
2	150	A B F
2	200	E
3	100	A B F
4	100	D G H
4	200	B F
4	250	A G H

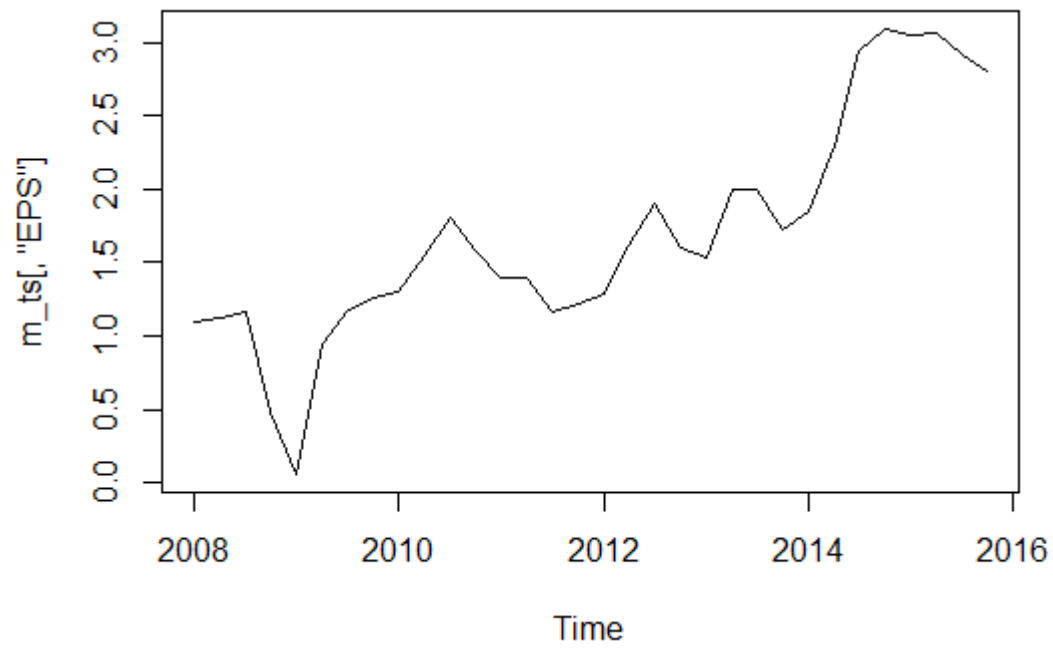
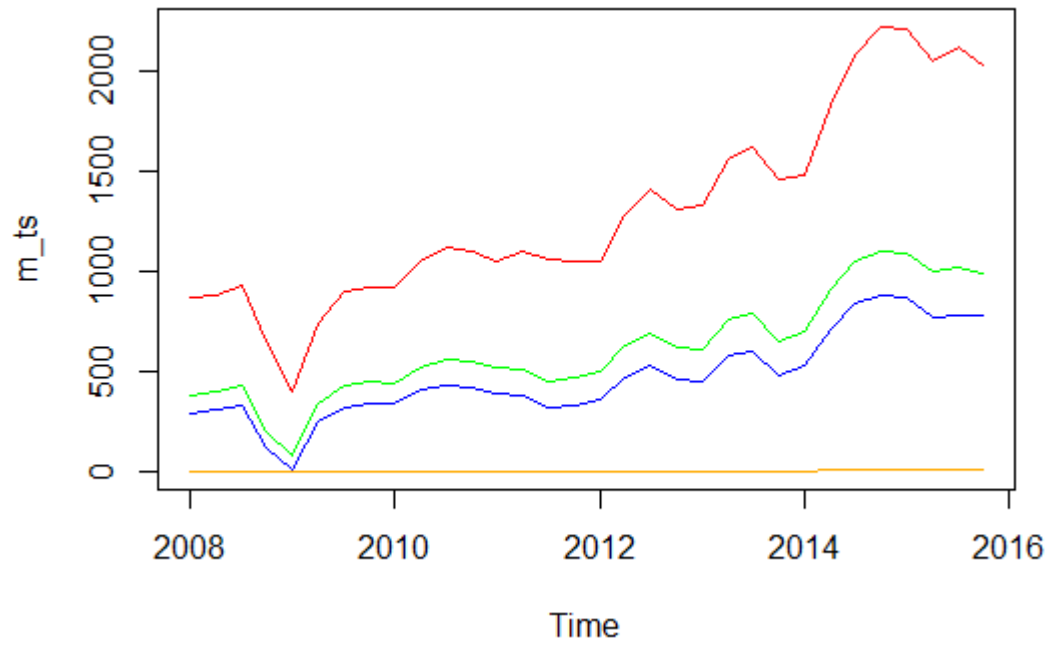
Frequent Sequences (minsup =2)			
Frequent 1-Sequences		Frequent 3-Sequences	
A	4	ABF	3
B	4	BF->A	2
D	2	D->BF	2
F	4	D->B->A	2
		D->F->A	2
Frequent 2-Sequences		Frequent 4-Sequences	
AB	3	D->BF->A	2
AF	3		
B->A	2		
BF	4		
D->A	2		
D->B	2		
D->F	2		
F->A	2		

Chapter 10: Time Series Mining with R

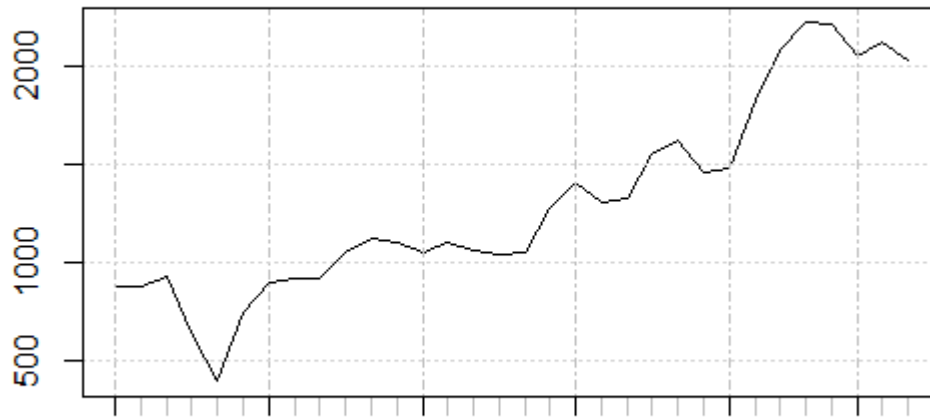


m_ts

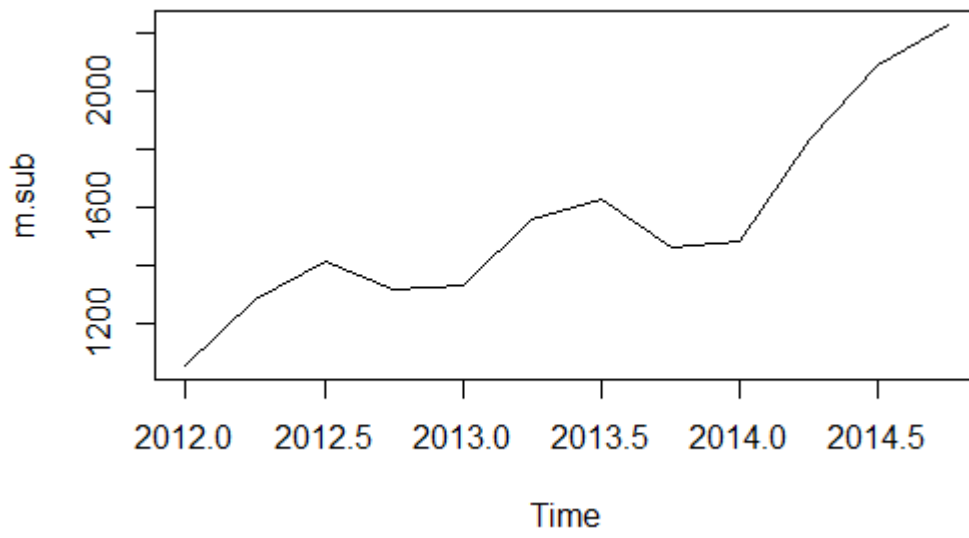




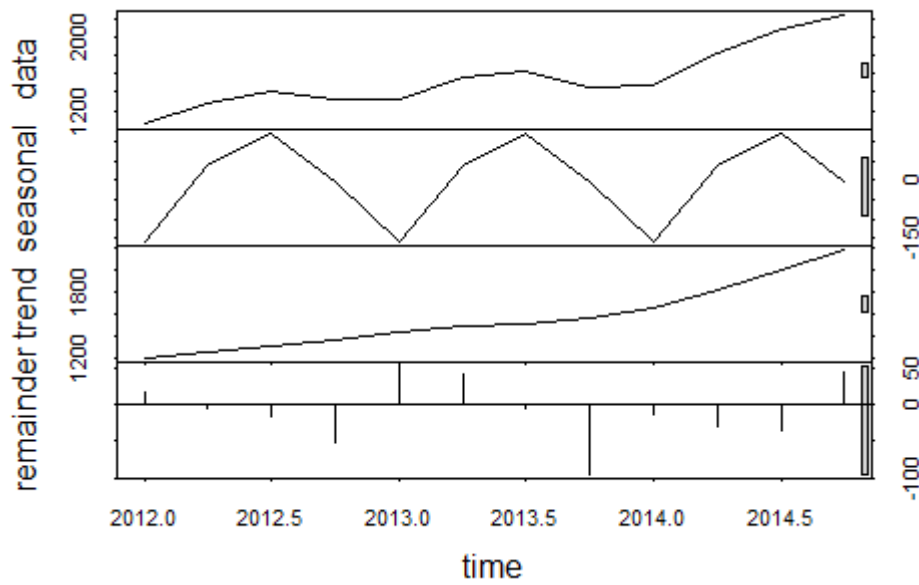
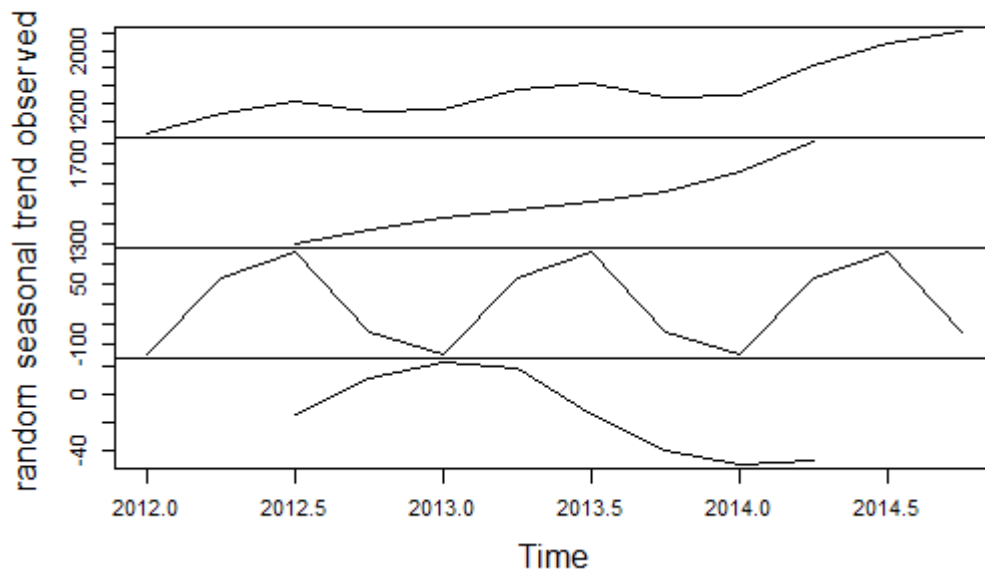
m.xts



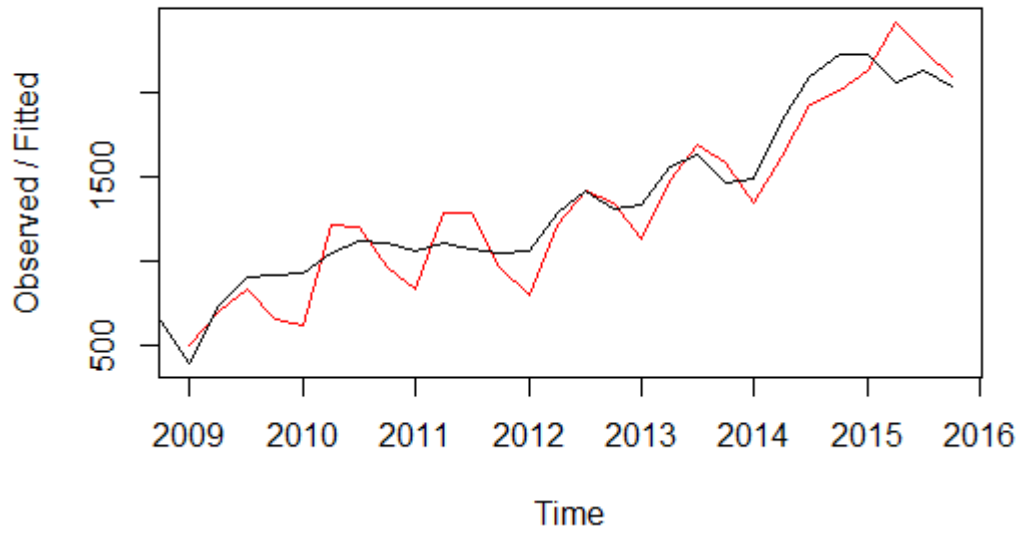
%b 2008 %b 2009 %b 2011 %b 2012 %b 2014

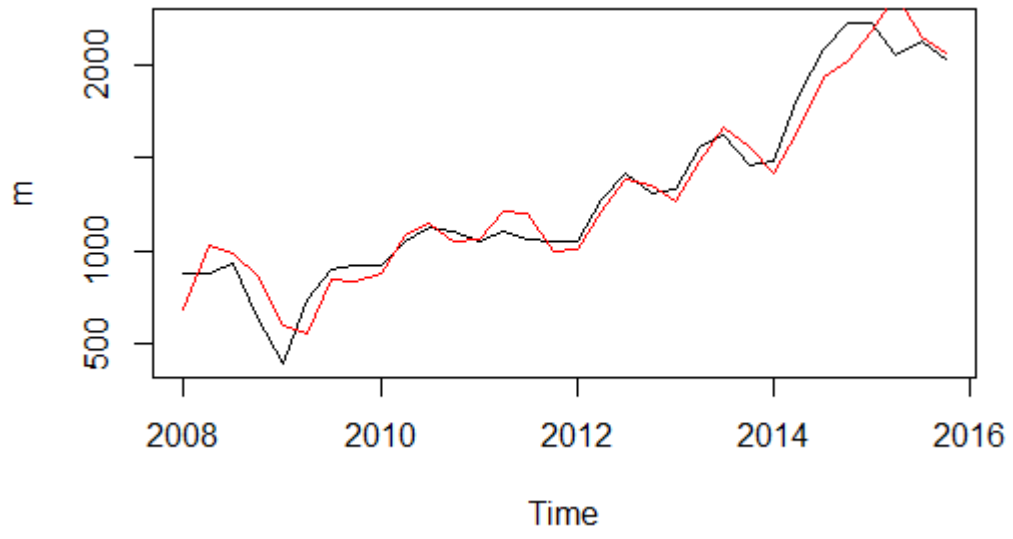


Decomposition of additive time series

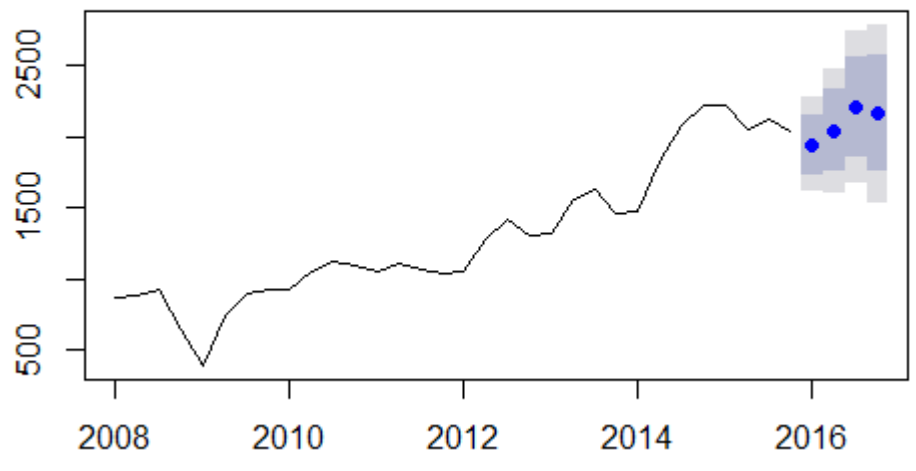


Holt-Winters filtering

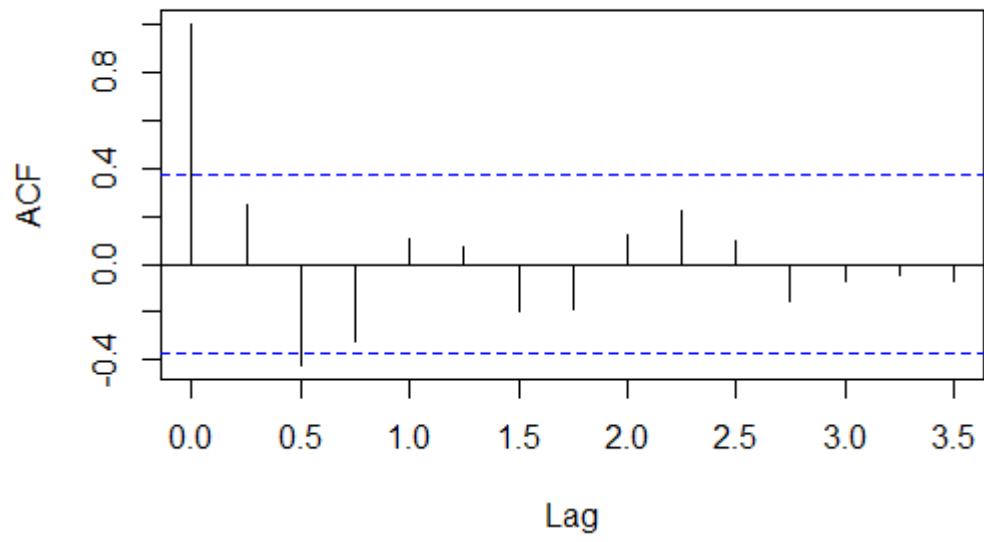




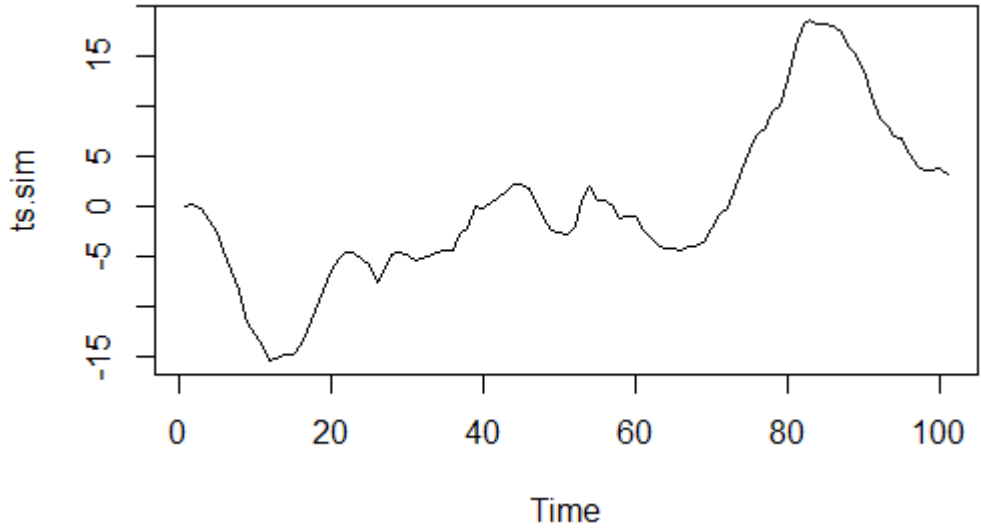
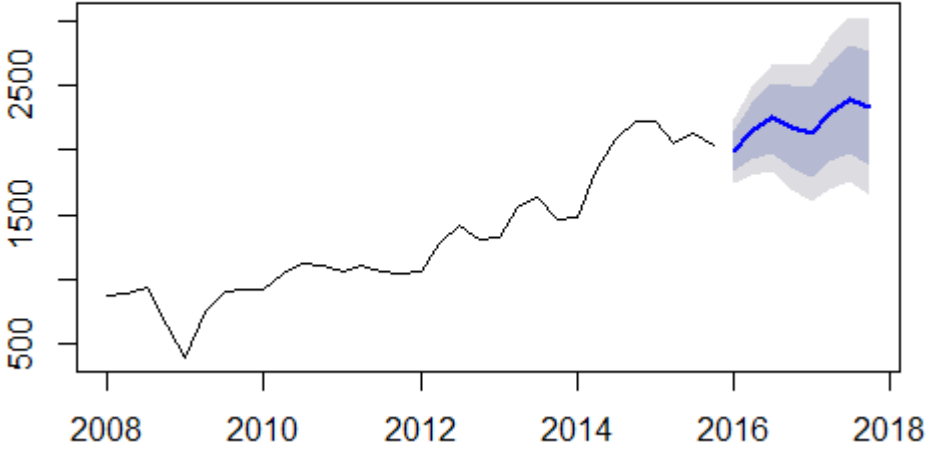
Forecasts from HoltWinters

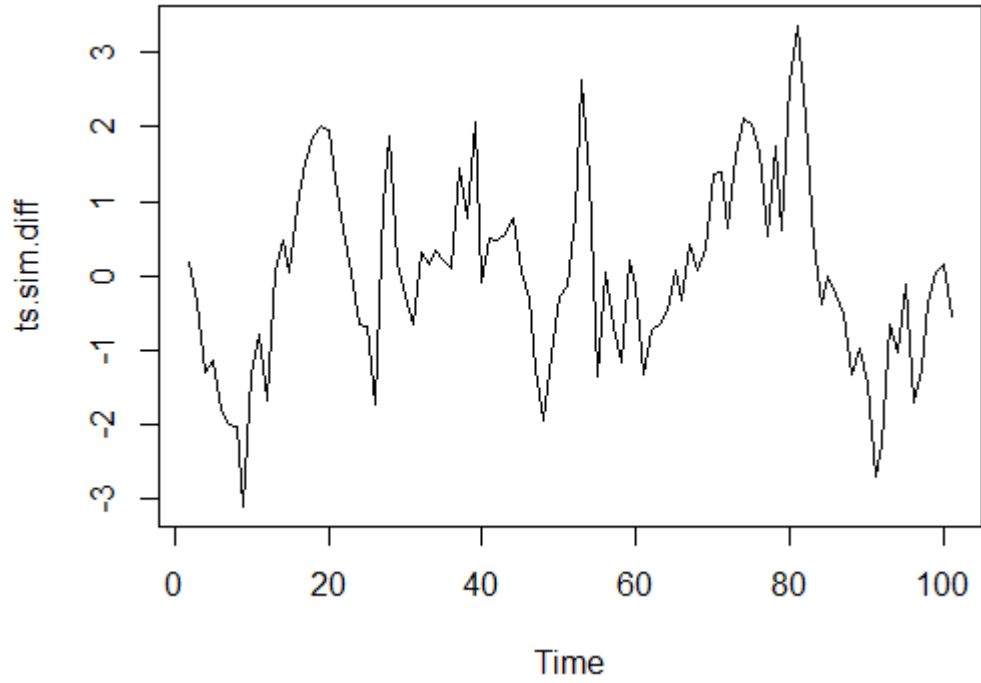


Series income.pre\$residuals

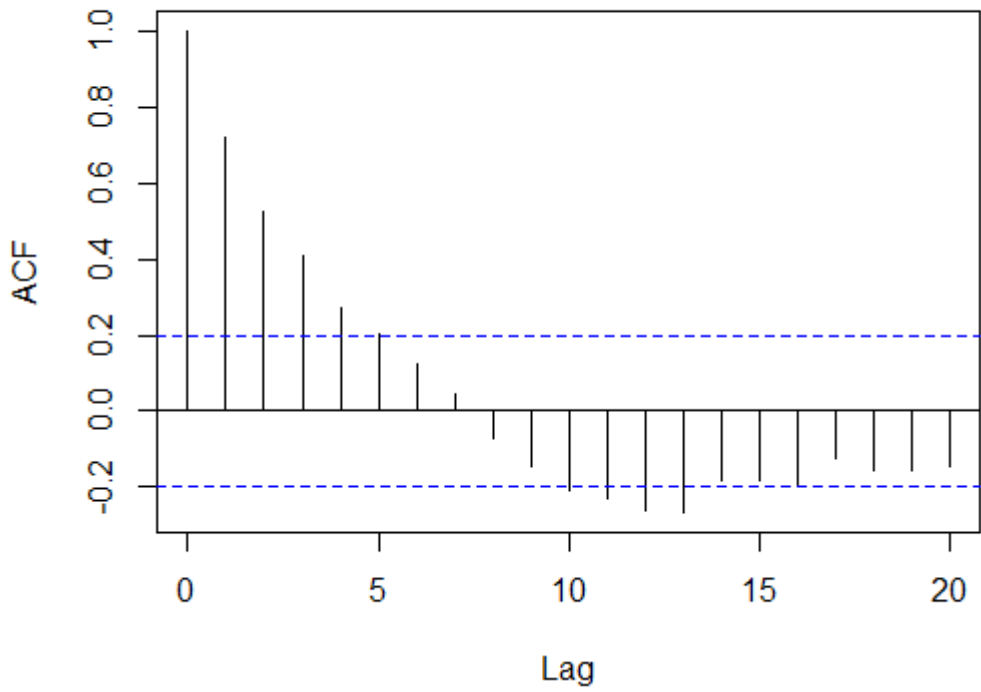


Forecasts from Holt-Winters' additive method

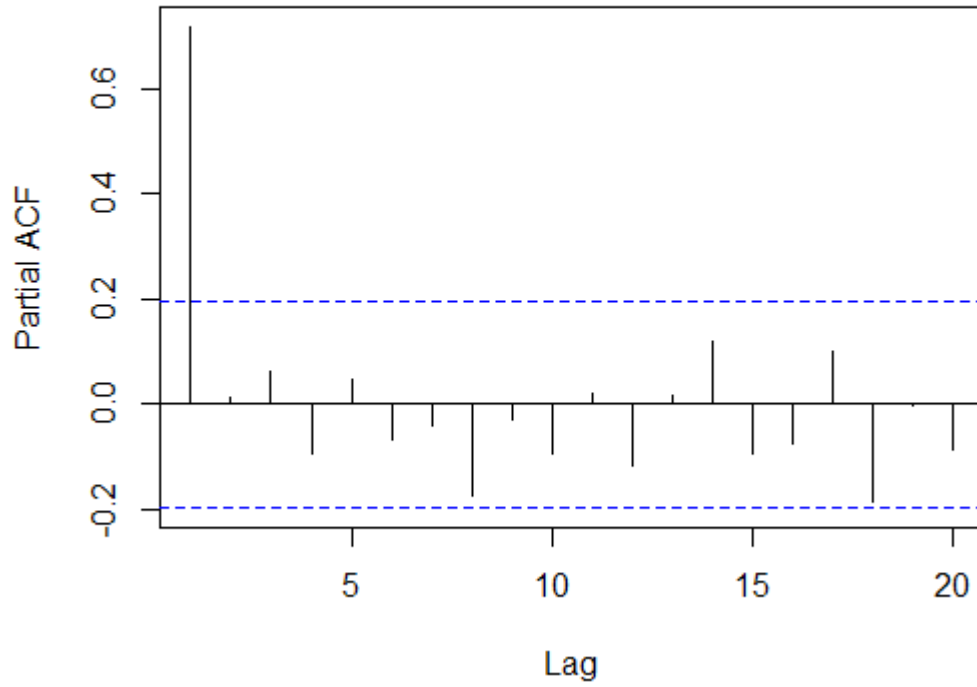




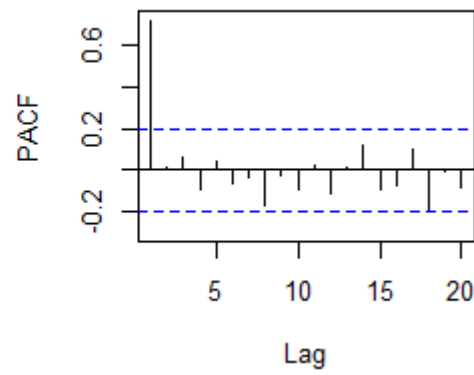
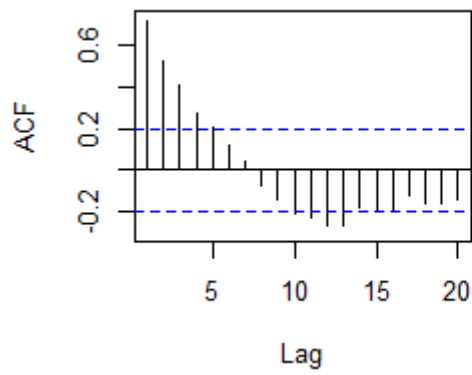
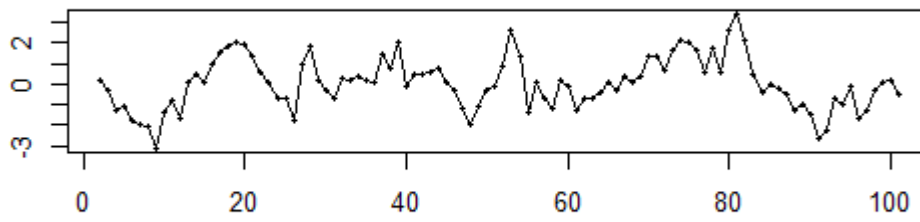
Series ts.sim.diff

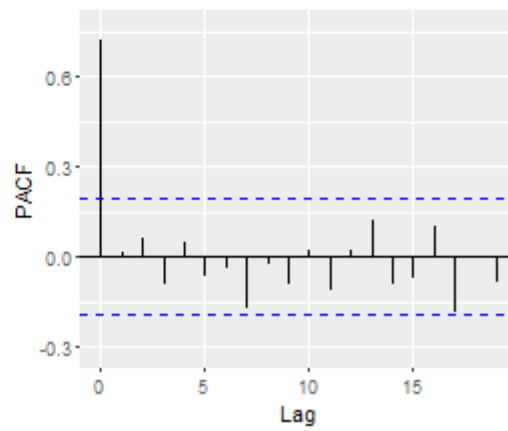
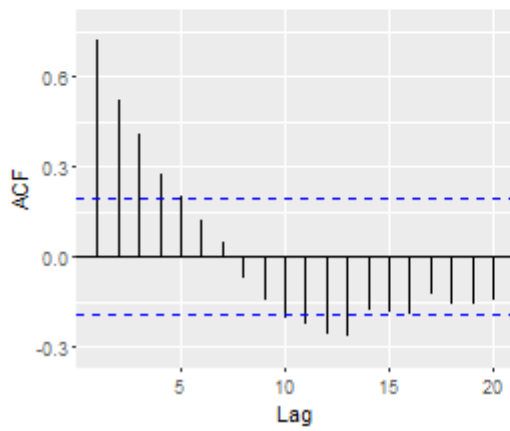
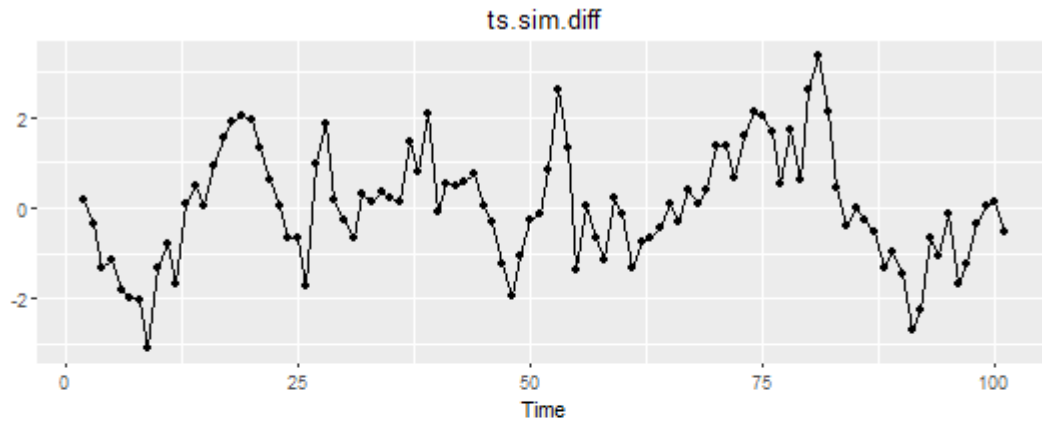


Series ts.sim.diff

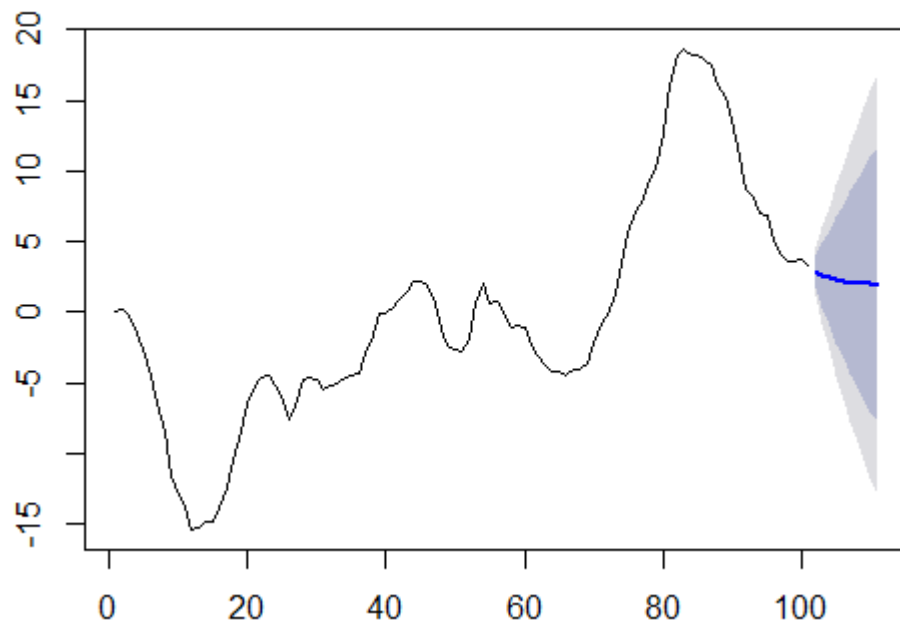


ts.sim.diff

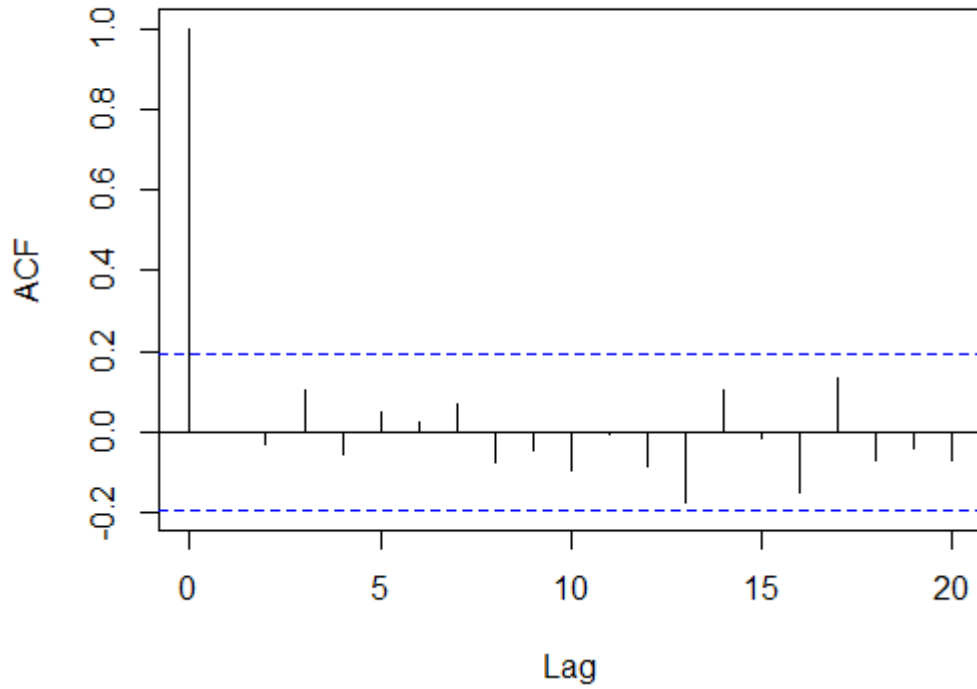




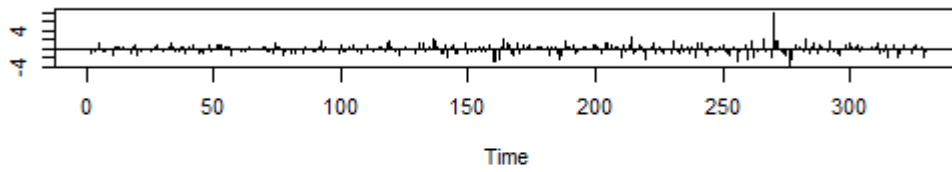
Forecasts from ARIMA(1,1,0)



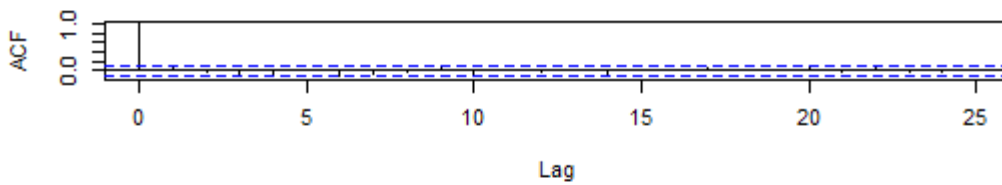
Series fit.predict\$residuals



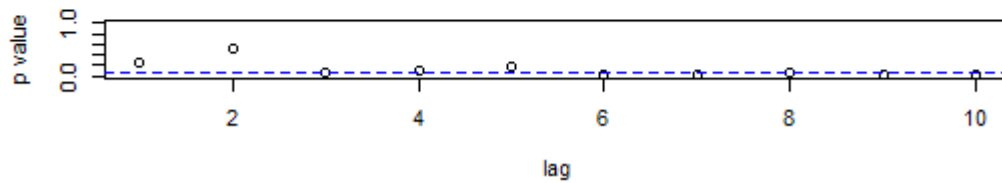
Standardized Residuals



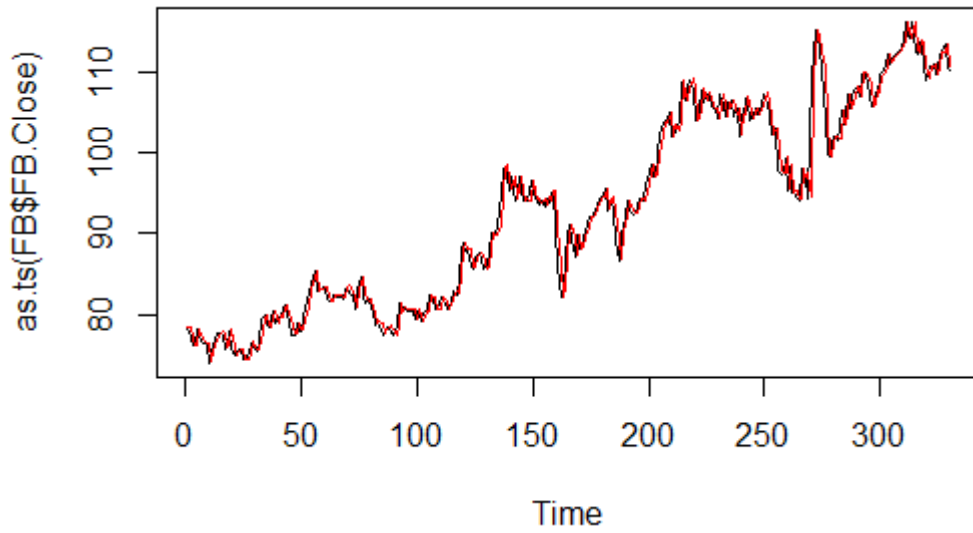
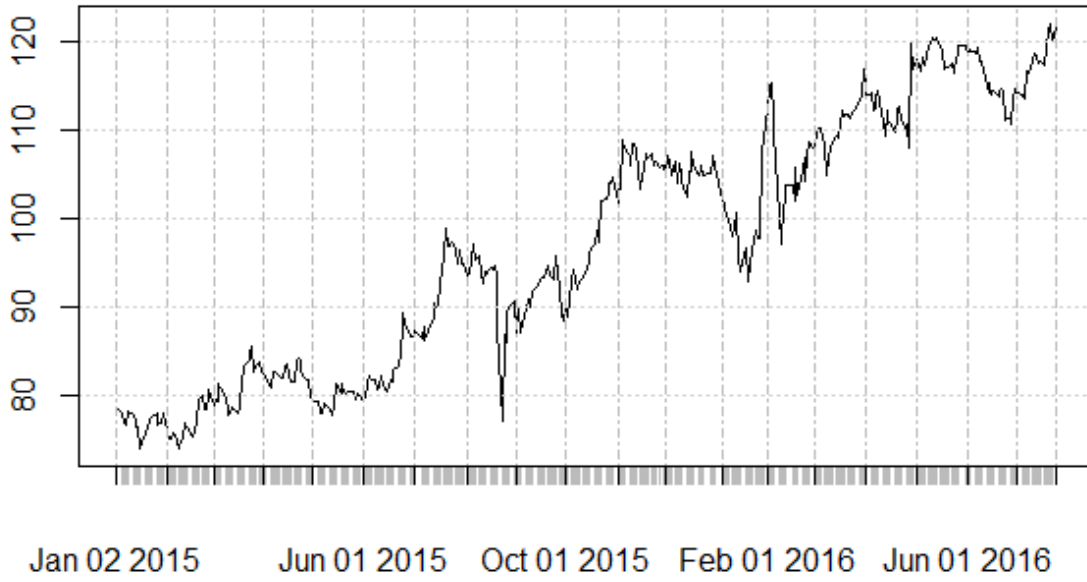
ACF of Residuals



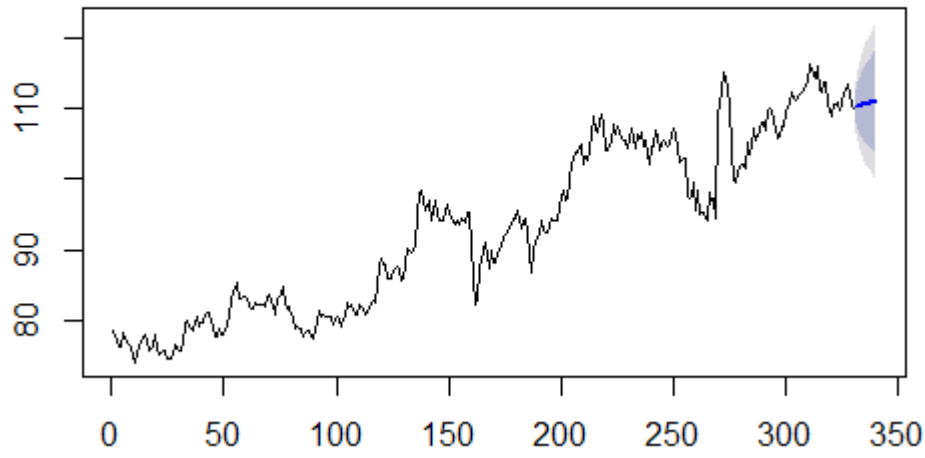
p values for Ljung-Box statistic



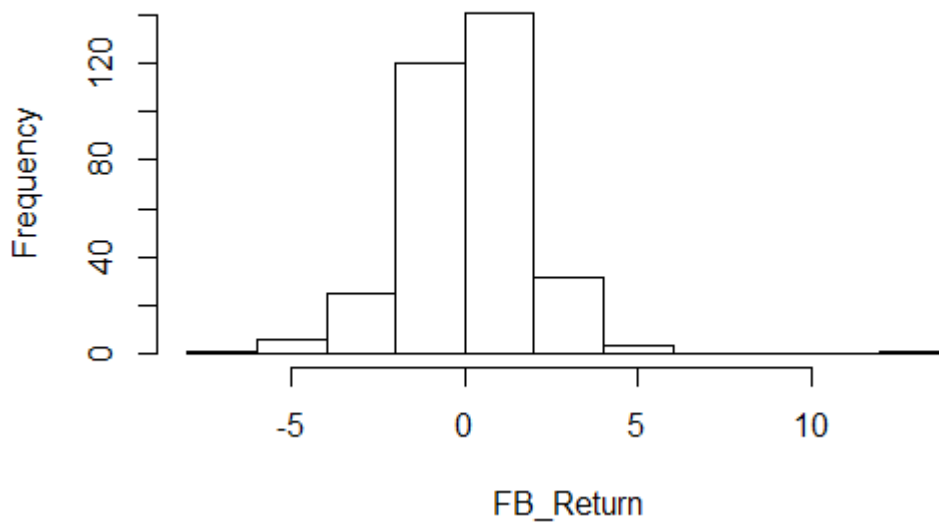
FB



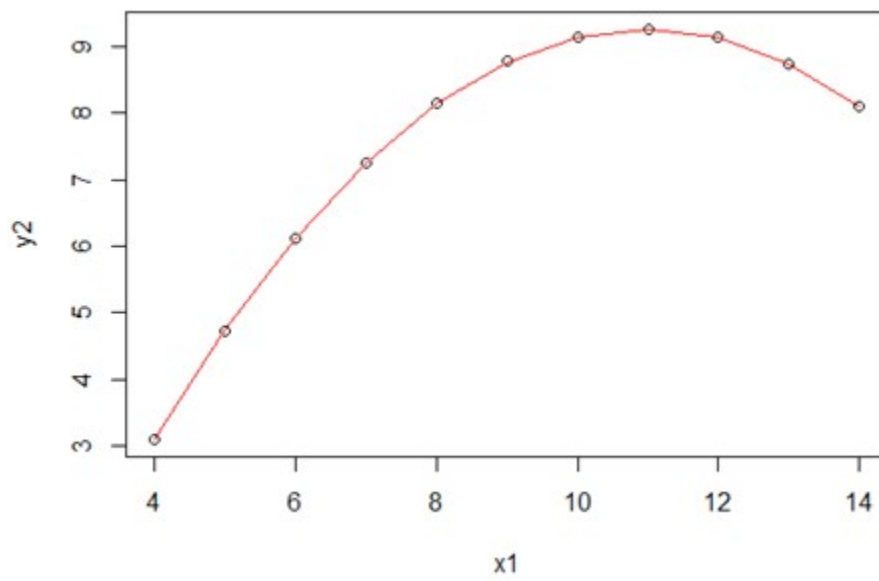
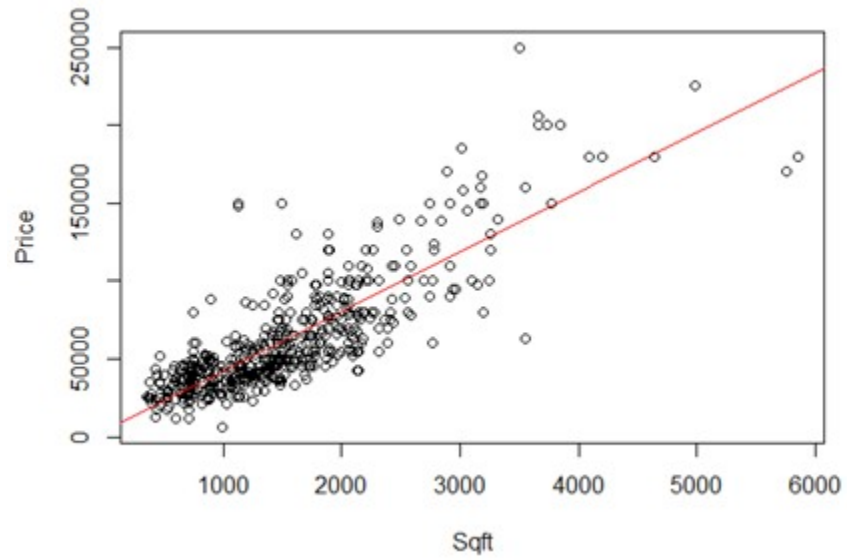
Forecasts from ARIMA(0,1,0) with drift

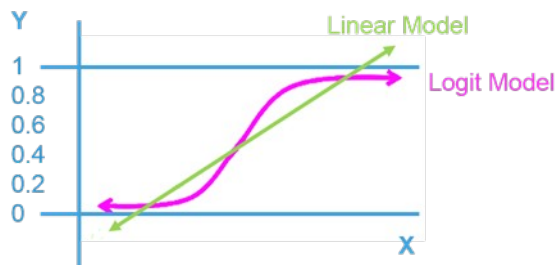
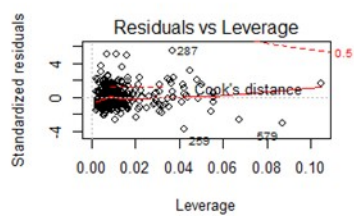
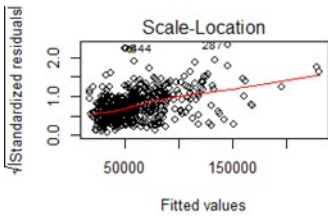
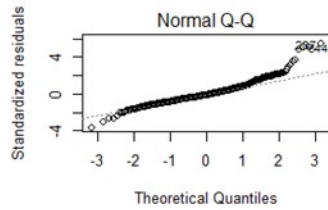
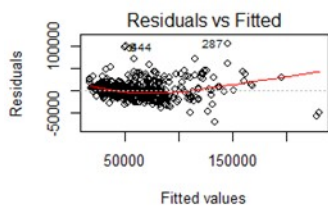
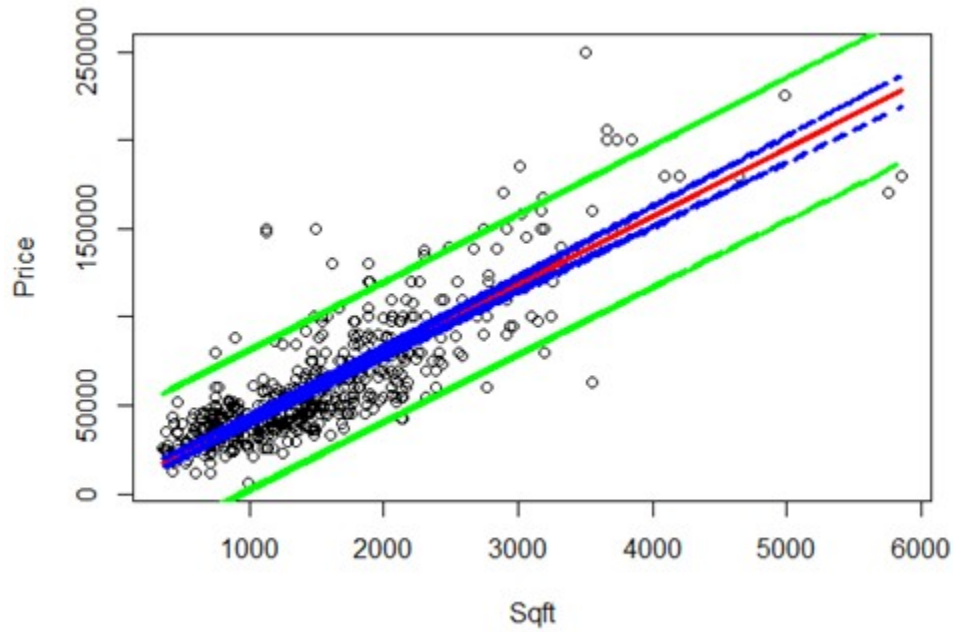


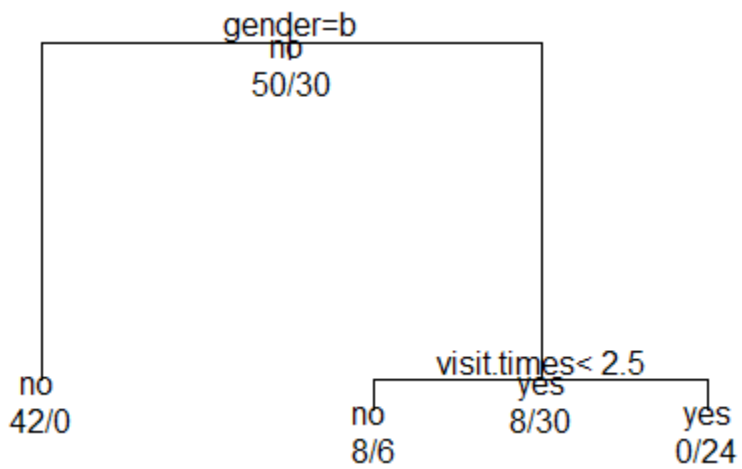
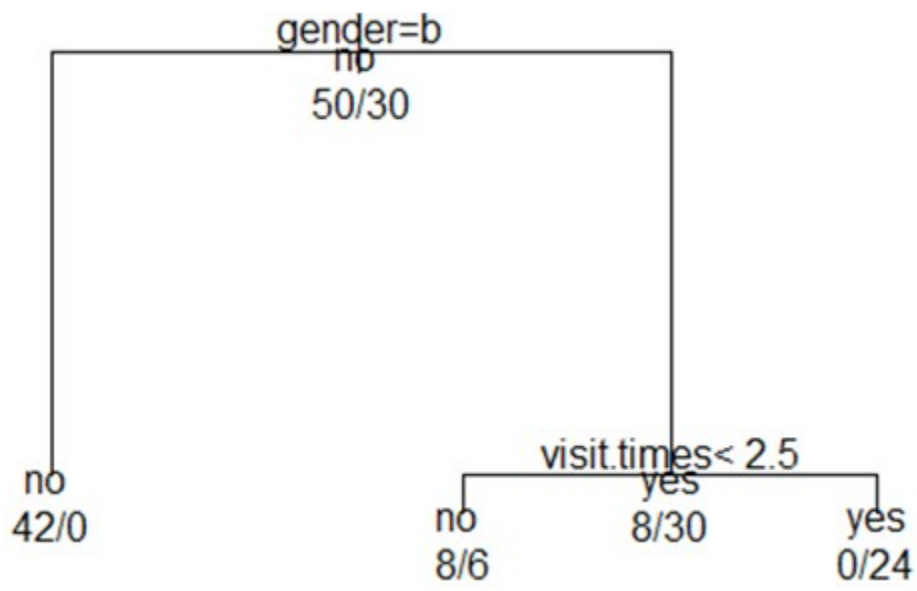
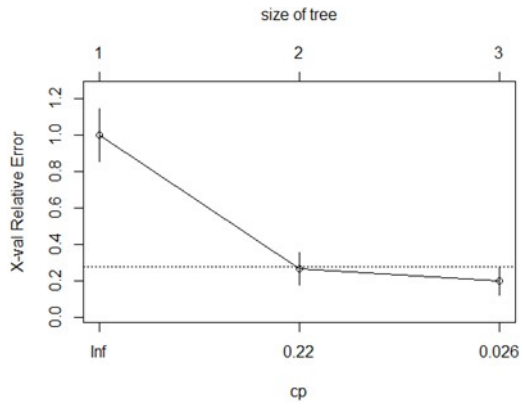
Histogram of FB_Return

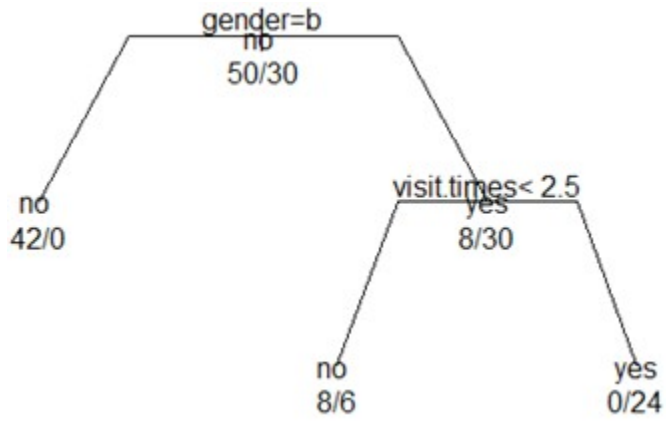


Chapter 11: Supervised Machine Learning

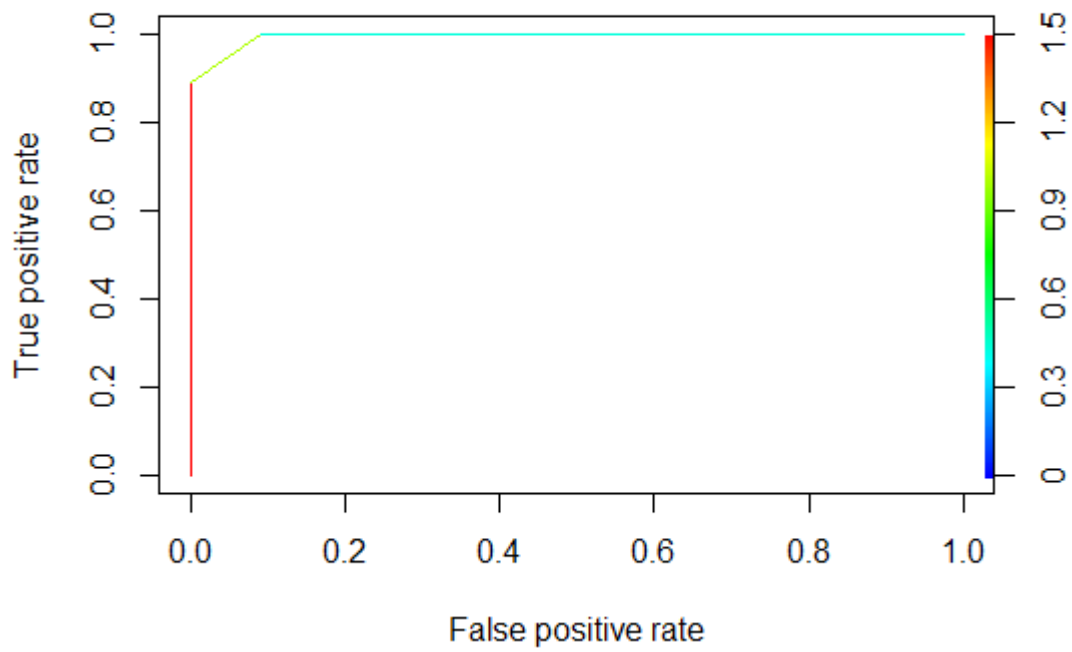




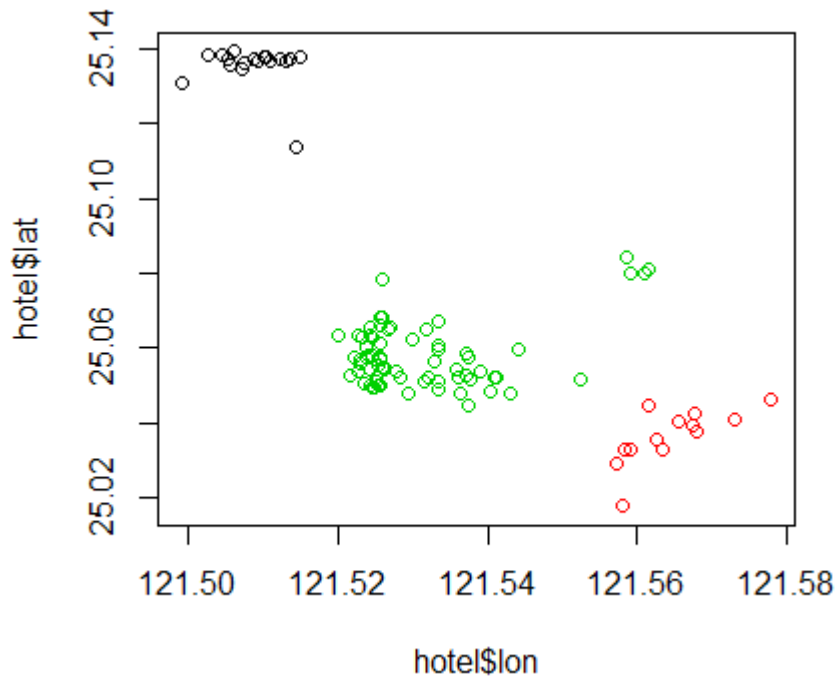




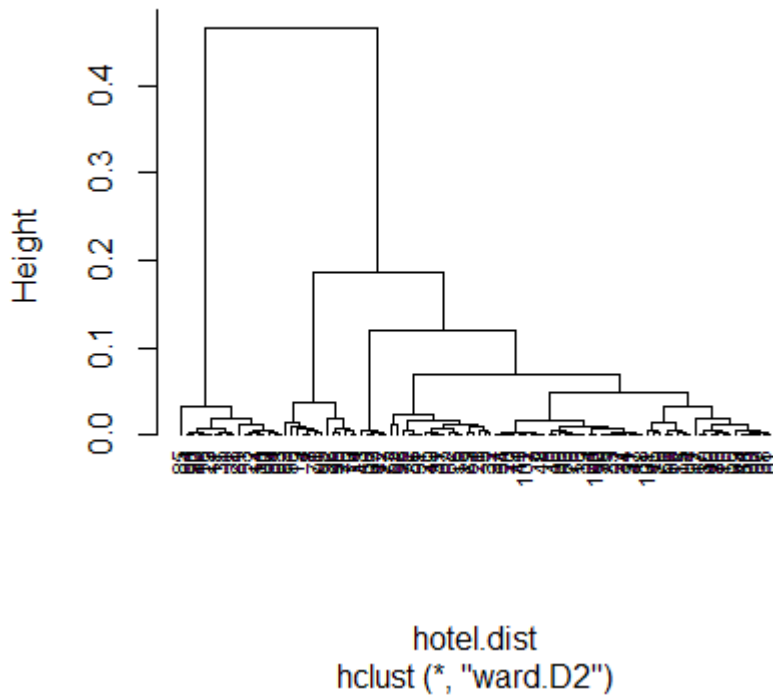
AUC: 0.994949494949495



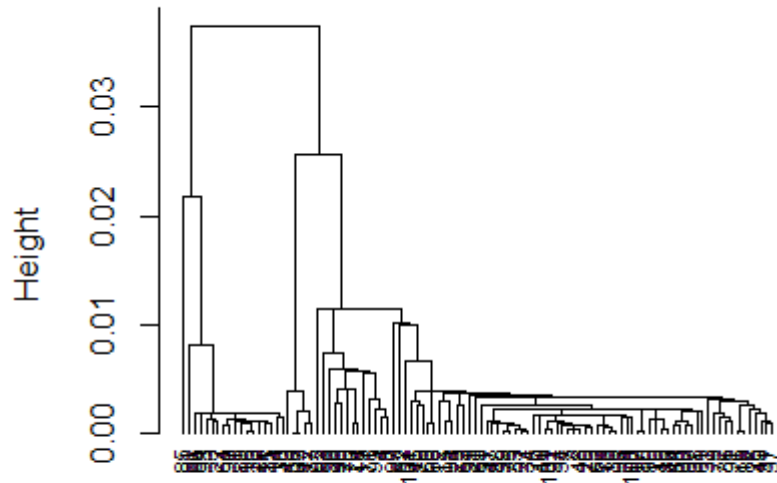
Chapter 12: Unsupervised Machine Learning



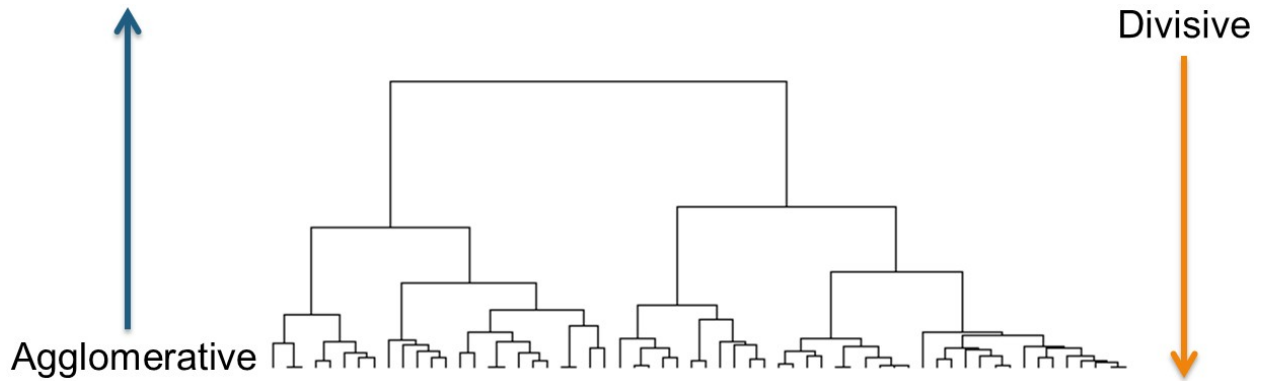
Cluster Dendrogram

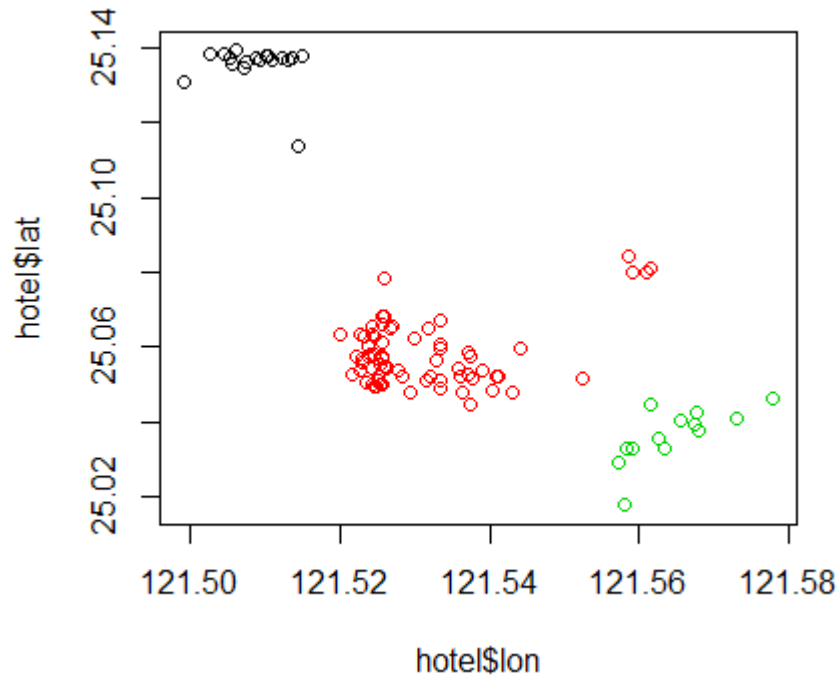


Cluster Dendrogram

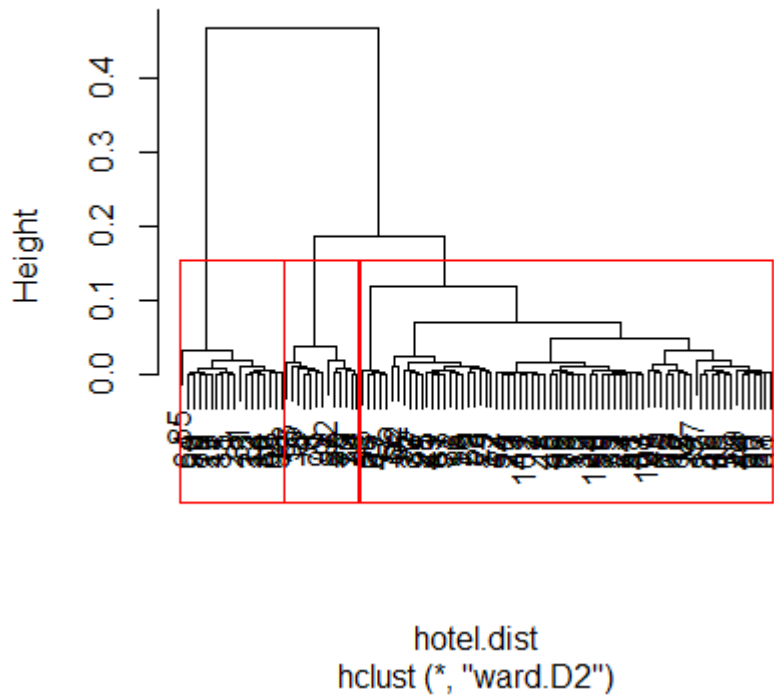


hotel.dist
hclust (*, "single")

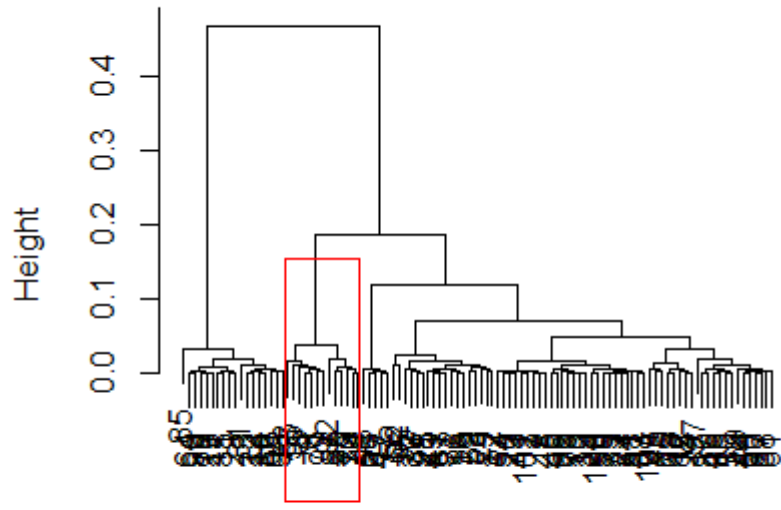




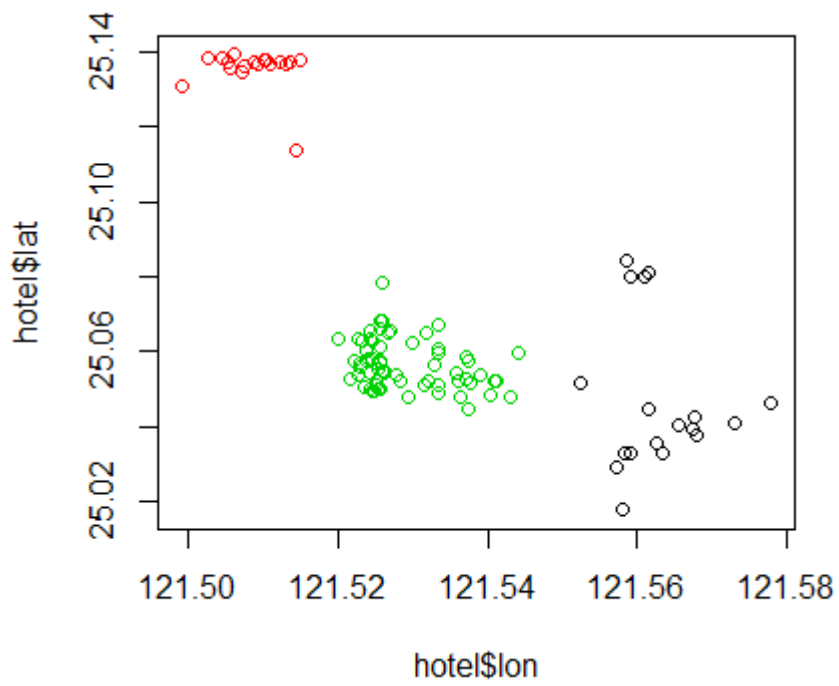
Cluster Dendrogram

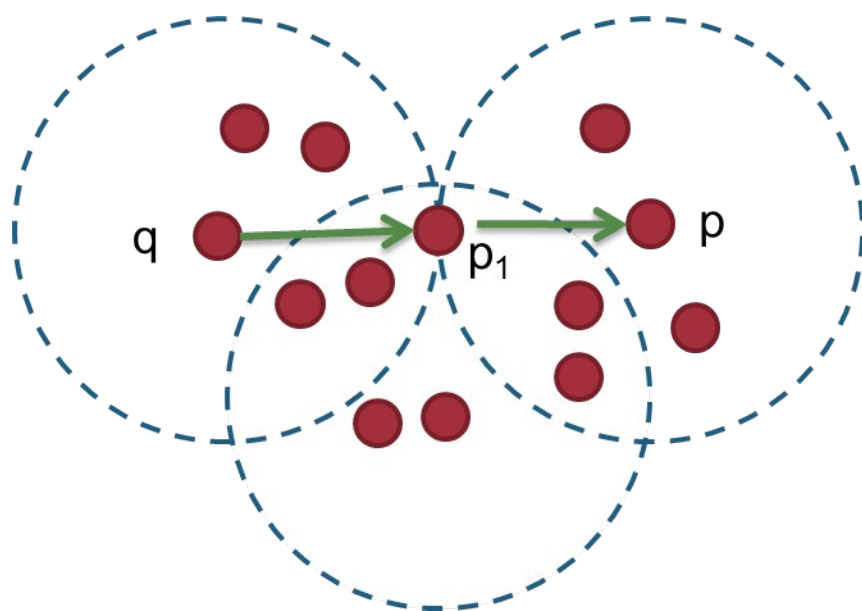
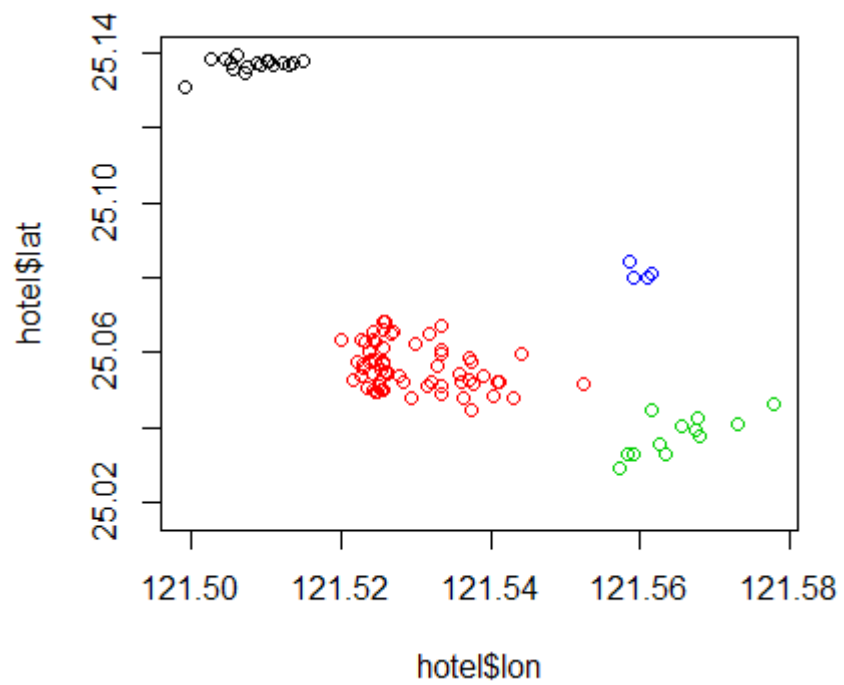


Cluster Dendrogram



hotel.dist
hclust (*, "ward.D2")

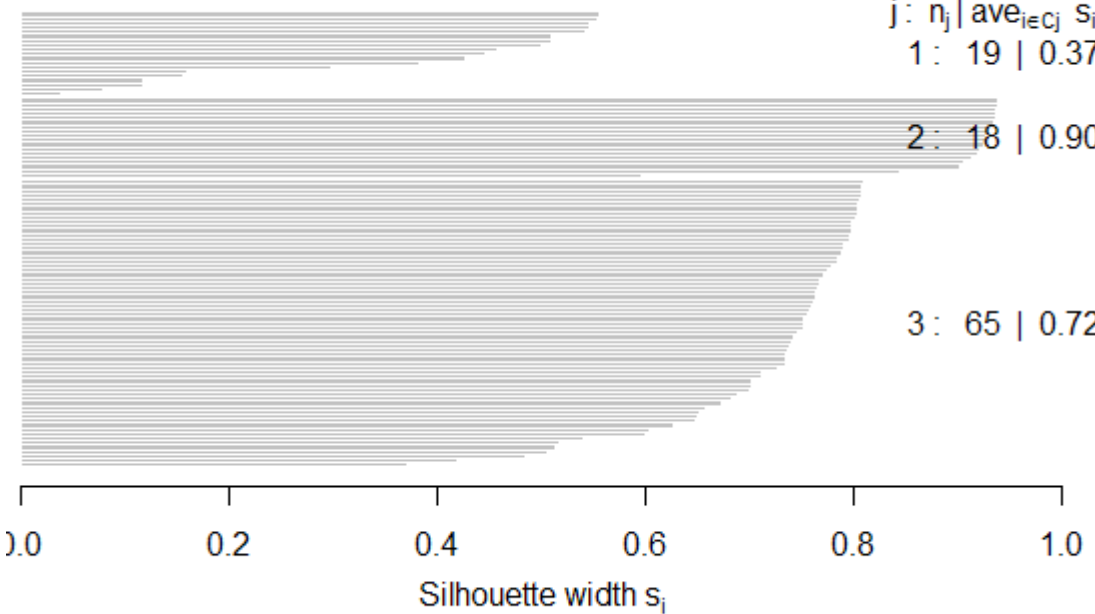




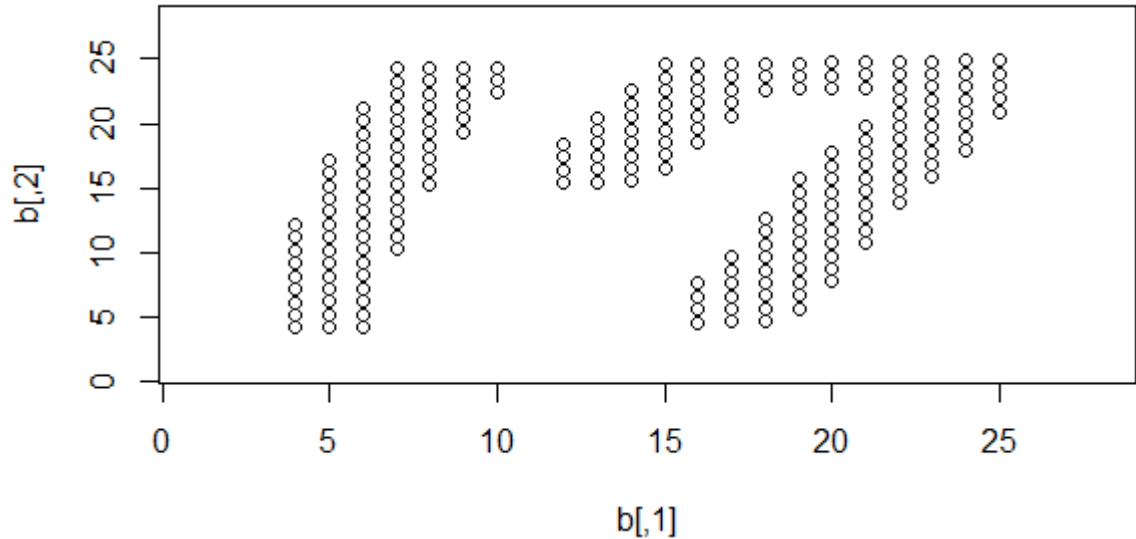
Silhouette plot of (x = km\$cluster, dist = hotel.dist)

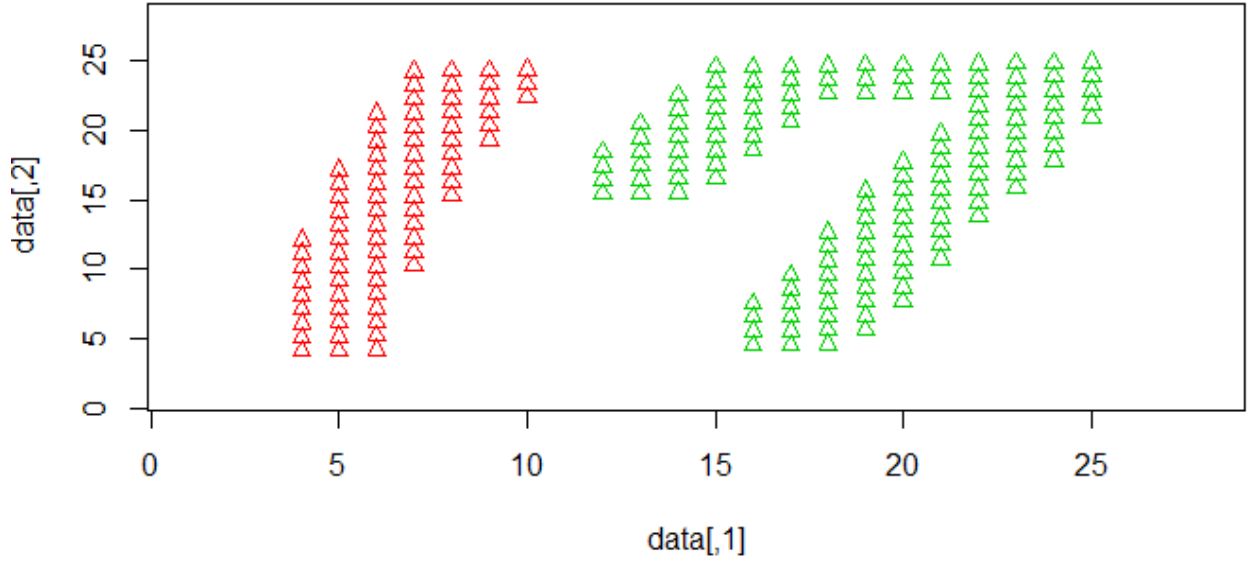
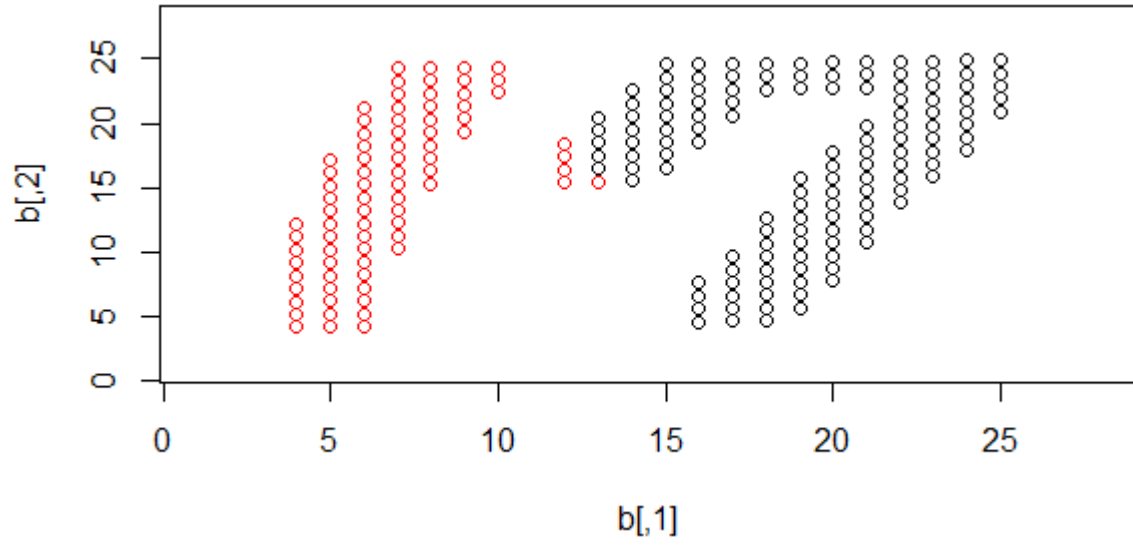
n = 102

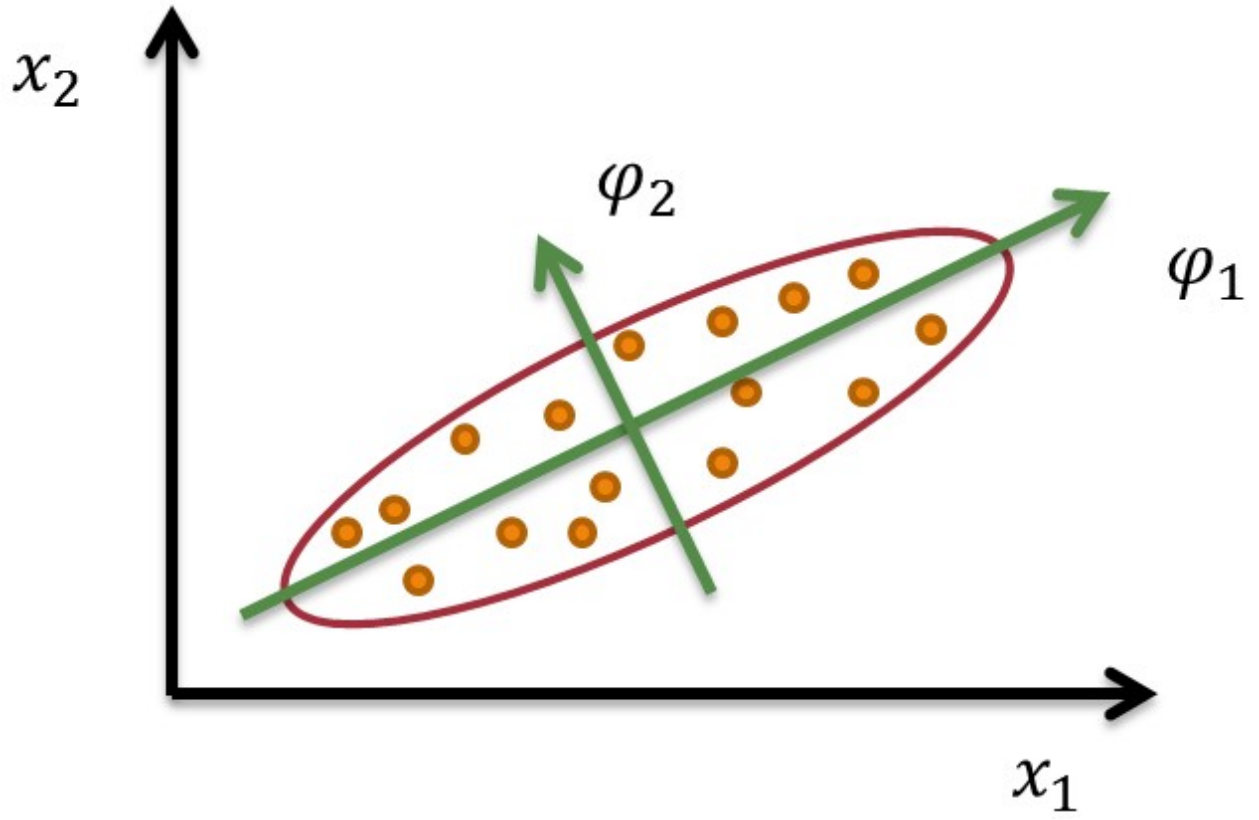
3 clusters C_j
 $j: n_j | \text{ave}_{i \in C_j} s_i$
1: 19 | 0.37
2: 18 | 0.90
3: 65 | 0.72



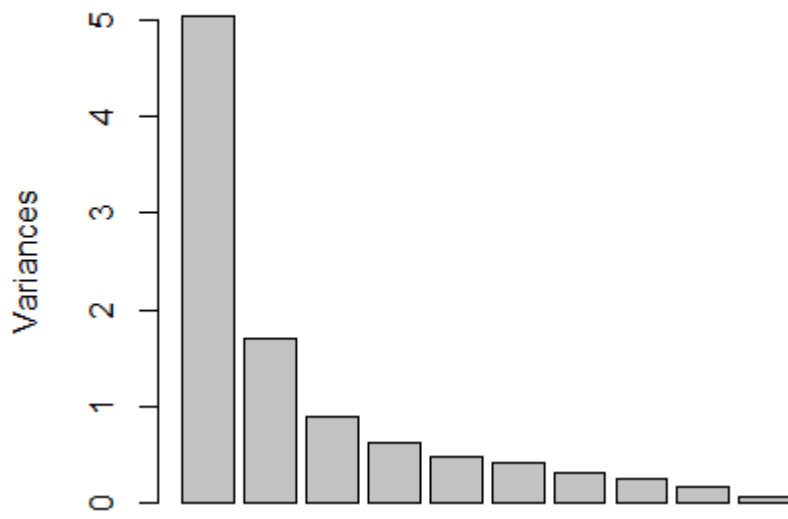
Average silhouette width : 0.68



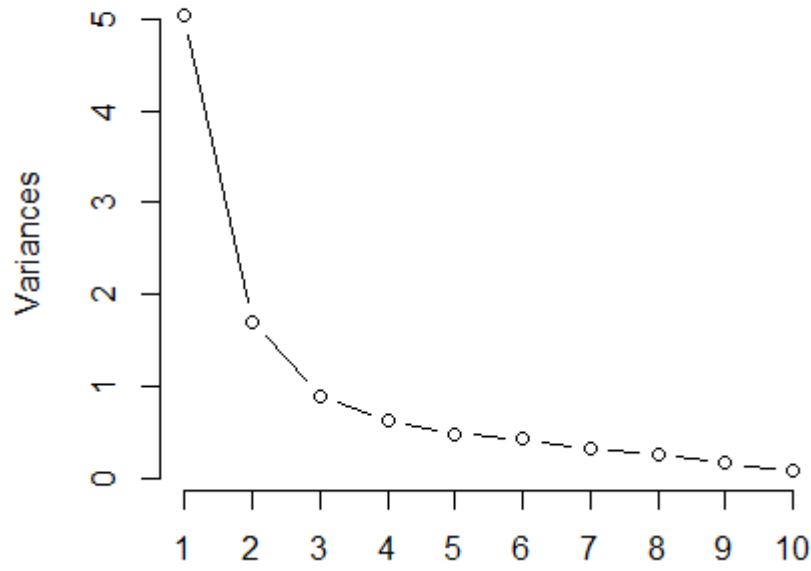




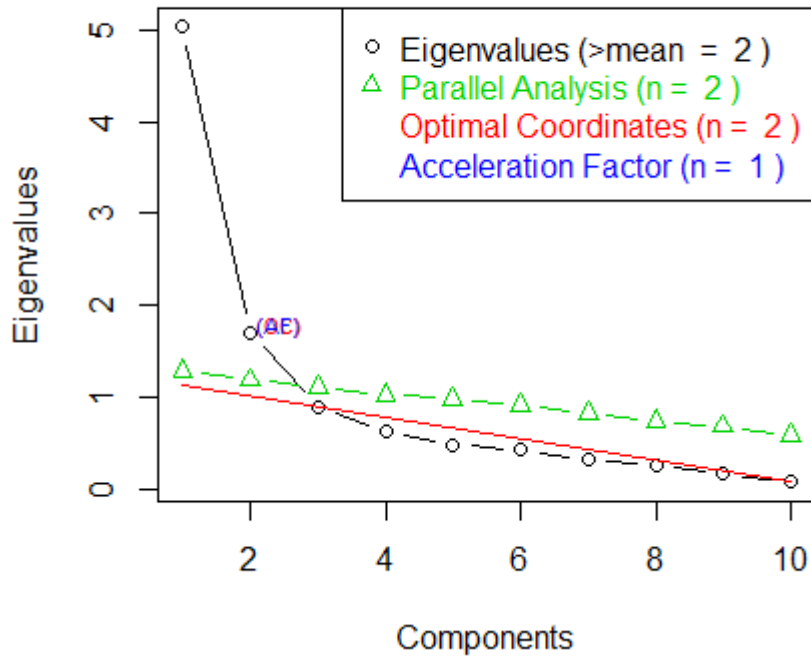
eco.pca



eco.pca



Non Graphical Solutions to Scree Test



eco.pca

