

SHETH L.U.J. AND SIR M.V. COLLEGE

SUBJECT: Data Analysis with R

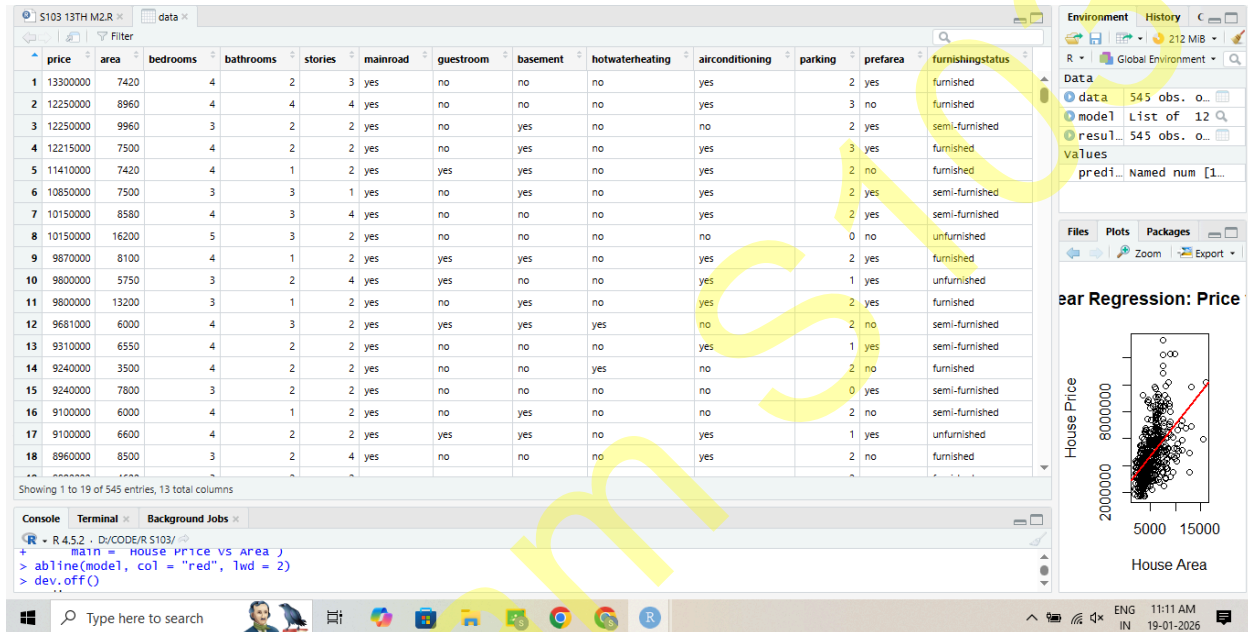
Aim: 13 Performing linear regression analysis using `lm()` (R).

14 Performing logistic regression using `glm()` (R).

15 Exporting results into external files (Excel, CSV, PDF) using `write.csv()` and `writexl` ®

13th output:

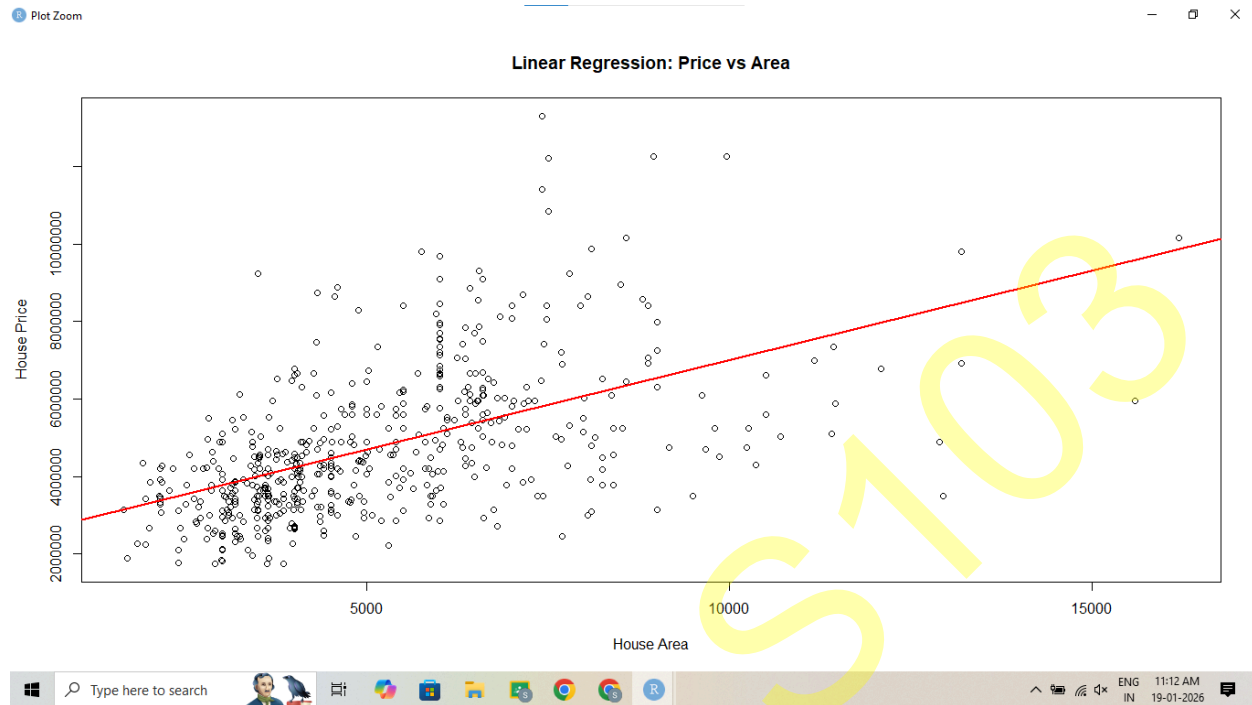
Dataset



SHETH L.U.J. AND SIR M.V. COLLEGE

SUBJECT: Data Analysis with R

Graph



Export import

<input type="checkbox"/>	.RData	153.9 KB	Jan 18
<input type="checkbox"/>	.Rhistory	18.4 KB	Jan 18
<input type="checkbox"/>	Airbnb_Open_Data.csv	34.2 MB	Aug 17
<input type="checkbox"/>	data.csv	1.4 MB	Sep 21
<input type="checkbox"/>	House_Price_Predictions.csv	16.5 KB	Jan 18
<input type="checkbox"/>	House_Price_Predictions.xlsx	16.6 KB	Jan 18
<input type="checkbox"/>	House_Price_Regression_Plot.pdf	31.6 KB	Jan 18
<input type="checkbox"/>	Housing.csv	29.3 KB	Jan 18
<input type="checkbox"/>	insurance.csv	54.3 KB	Dec 21
<input type="checkbox"/>	Pokemon.csv	43 KB	Sep 17
<input type="checkbox"/>	R S103.Rproj	218 B	Jan 19
<input type="checkbox"/>	S103 8TH M2.R	435 B	Dec 21
<input type="checkbox"/>	S103 9TH M2.R	505 B	Dec 21

ENG 11:13 AM IN 19-01-2026

SHETH L.U.J. AND SIR M.V. COLLEGE

SUBJECT: Data Analysis with R

14th output
Dataset

The RStudio interface displays a dataset with 3000 observations and 8 variables. The variables are Age, Income, Gender, Marital_Status, Education_Level, Purchase_History, Product_Interest, and Purchase. The console shows the command `head(results)` and the output is displayed in the Environment pane.

	Age	Income	Gender	Marital_Status	Education_Level	Purchase_History	Product_Interest	Purchase
1	56	81063	Male	Single	Bachelor's	2	7	1
2	69	138527	Male	Single	High School	11	8	1
3	46	143239	Female	Married	High School	19	9	1
4	32	147896	Male	Divorced	PhD	6	2	0
5	60	55144	Male	Single	PhD	7	1	1
6	25	72161	Female	Married	Bachelor's	8	4	0
7	38	116718	Female	Married	Bachelor's	13	5	0
8	56	145873	Male	Divorced	High School	4	10	1
9	36	111074	Female	Married	Master's	20	1	1
10	40	97360	Male	Married	High School	18	5	1
11	28	70979	Female	Single	Bachelor's	20	6	1
12	28	117661	Male	Single	Master's	15	3	0
13	41	26979	Male	Divorced	PhD	11	7	0
14	70	46189	Male	Divorced	Bachelor's	20	6	1
15	53	62600	Male	Married	Bachelor's	3	4	0
16	57	79560	Female	Single	Master's	7	3	1
17	41	98040	Female	Divorced	Bachelor's	6	5	0
18	20	143257	Female	Divorced	Bachelor's	14	3	0
19	39	81558	Female	Divorced	Bachelor's	5	10	1
20	70	106705	Male	Married	Bachelor's	4	9	1

Results

The RStudio interface displays the results of a logistic regression model. The results are shown in the Environment pane, including the predicted class and predicted probability for each observation. The console shows the command `head(results)` and the output is displayed in the Environment pane.

	Actual	Predicted	Probability
1	1	1	0.5525195
2	1	1	0.5481562
3	1	0	0.4922565
4	0	0	0.4771913
5	1	1	0.5865608
6	0	1	0.5036453
7	0	0	0.4998540
8	1	0	0.4869097
9	1	0	0.4986177
10	1	1	0.5213685
11	1	1	0.5171555
12	0	1	0.5024856
13	0	1	0.5203987
14	1	1	0.5502272
15	0	1	0.5495605
16	1	1	0.5463364
17	0	0	0.4896932
18	0	0	0.4518828

SHETH L.U.J. AND SIR M.V. COLLEGE

SUBJECT: Data Analysis with R

Exporting result in csv

The screenshot displays the R Studio environment. The main editor window shows a data frame with three columns: 'Actual', 'Predicted', and 'Probability'. The data consists of 29 rows of binary values. The console window at the bottom shows the output of a model fit, including the residual deviance and degrees of freedom. The file explorer on the right side of the interface shows a list of files in the 'D:\CODE\R\S103' directory, including 'House_Price_Predictions.csv', 'House_Price_Predictions.xlsx', 'House_Price_Regression_Plot.pdf', 'Housing.csv', 'Insurance.csv', 'Logistic_Regression_Customer_Purchase_Res', 'Pokemon.csv', 'R_S103.Rproj', and several 'S103' files with different extensions.

Actual	Predicted	Probability
1	1	0.552519512681794
1	1	0.548156181912796
1	0	0.492256484061465
0	0	0.477191330042497
1	1	0.586560780668473
0	1	0.503645263732515
0	0	0.499853953646572
1	0	0.486909671612638
1	0	0.498617699792083
1	1	0.521368484842706
1	1	0.517155450744223
0	1	0.50248553716619
0	1	0.520398700230457
1	1	0.55022719745741
0	1	0.54956050444831
1	1	0.54633842282755
0	0	0.489693243442426
0	0	0.4518827584647
1	0	0.478813135045427
1	1	0.539458850992622
0	1	0.521174571933795
1	0	0.494587568037536
0	1	0.559958926792263
1	1	0.51679722138919
1	1	0.509314282002276
1	1	0.527541406598093
1	1	0.544389008170905
1	1	0.545686911579406

onsole Terminal Background Jobs
R - R 4.5.2 - D:\CODE\R\S103\
estidual deviance: 4143.5 on 2990 degrees of freedom
IC: 4163.5

Files Plots Packages Help Viewer Presentation
D:\CODE\R\S103
Name Size Modified
House_Price_Predictions.csv 16.5 KB Jan 19, 2026, 11:11 AM
House_Price_Predictions.xlsx 16.6 KB Jan 19, 2026, 11:11 AM
House_Price_Regression_Plot.pdf 31.6 KB Jan 19, 2026, 11:11 AM
Housing.csv 29.3 KB Jan 18, 2026, 7:32 PM
Insurance.csv 54.3 KB Dec 21, 2025, 7:32 PM
Logistic_Regression_Customer_Purchase_Res 72.9 KB Jan 19, 2026, 11:28 AM
Pokemon.csv 43 KB Sep 19, 2019, 3:44 PM
R_S103.Rproj 218 B Jan 19, 2026, 10:38 AM
S103 8TH M2.R 435 B Dec 21, 2025, 7:37 PM
S103 9TH M2.R 505 B Dec 21, 2025, 7:43 PM
S103 10TH M2.R 768 B Jan 10, 2026, 6:04 PM
S103 11TH M2.R 511 B Jan 10, 2026, 6:17 PM
S103 12TH M2.R 330 B Jan 10, 2026, 6:24 PM
S103 13TH M2.R 1.6 KB Jan 19, 2026, 11:09 AM