

Never miss a tutorial:



Machine Learning Mastery
Making Developers Awesome at Machine Learning

Picked for you:



Your First Machine Learning Project in R
Step-By-Step

[Click to Take the FREE R Machine Learning Crash-Course](#)

Search...



[Feature Selection with the Caret R](#)

[Package](#)

Machine Learning Datasets in R (10 datasets you can use right now)



How to Build an Ensemble Of Machine
Learning Algorithms in R
Brownlee on February 12, 2016 in R Machine Learning

[Tweet](#)

[Tweet](#)

[Share](#)

[Share](#)



Tune Machine Learning Algorithms in R
(random forest case study)
dated on August 15, 2020

You need standard datasets to practice machine learning.



How To Estimate Model Accuracy in R
Using The Caret Package

In this short post you will discover how you can load standard classification and regression datasets in R

This post will show you 3 R libraries that you can use to load standard datasets and 10 specific datasets that you can use for machine learning in R.

It is invaluable to have these datasets in R so that you can test, practice and experiment with machine learning techniques and improve your skill with the platform.

The [Machine Learning with R EBook](#) is

where you'll find the **Really Good** stuff.

Kick-start your project with my new book [Machine Learning Mastery With R](#), including *step-by-step tutorials* & [SEE WHAT'S INSIDE](#) for all examples.

Let's get started.

Practice On Small Well-Understood Datasets

There are hundreds of standard test datasets that you can use to practice and get better at machine learning.

Most of them are hosted for free on the UCI Machine Learning Repository. These datasets are useful because they are well understood, they are well behaved and they are small.

This last point is critical when practicing machine learning because:

- You can download them fast.
- You can fit them into memory easily.

[Start Machine Learning](#)

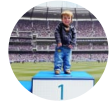
• You can run algorithms on them quickly.

Never miss a tutorial:

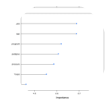
Learn more about practicing machine learning using datasets from the UCI Machine Learning Repository in this post.



Picked for you: Practice Machine Learning with Small In-Memory Datasets from the UCI Machine Learning Repository



Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the Caret R
Package



How to Build an Ensemble Of Machine
Learning Algorithms in R



Tune Machine Learning Algorithms in R
(random forest case study)

Access Standard Datasets in R

You can load the standard datasets into R as CSV files.



How To Estimate Model Accuracy in R
Using The Caret Package

This is a more convenient approach to loading the datasets that are available in third party R libraries that you can find on the R Network (CRAN).

Start Machine Learning

You can master applied Machine Learning **without math or fancy degrees**. Find out how in this *free* and *practical* course.

☐ I consent to receive information about services and special offers by email. For more information, see the [Privacy Policy](#).

[START MY EMAIL COURSE](#)

Which libraries should you use and what datasets are good to start with.

Loving the Tutorials?

The [Machine Learning with R](#) EBook is where you'll find the **Really Good** stuff.

Need more Help with R for Machine Learning?

>> SEE WHAT'S INSIDE

Take my free 7 day email course and discover how to use R on your project (with sample code).

Click to sign-up and also get a free PDF Ebook version of the course.

[Start Your FREE Mini-Course Now](#)

How To Load Standard Datasets in R

In this section you will discover the libraries that you can use to get access to standard machine learning datasets.

[Start Machine Learning](#)

You will also discover specific classification and regression that you can load and use to practice machine learning in R.



Picked for you:



Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the Caret R
Package



How to Build an Ensemble Of Machine
Learning Algorithms in R



Tune Machine Learning Algorithms in R
(random forest case study)



How To Estimate Model Accuracy in R
Using The Caret Package

Start Machine Learning



You can master applied Machine Learning
without math or fancy degrees.
Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Loving the Tutorials?

The [Machine Learning with R](#) EBook is
where you'll find the **Really Good** stuff.

>> SEE WHAT'S INSIDE

Start Machine Learning

Never miss a tutorial:



Picked for you:



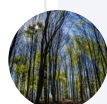
Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the Caret R
Package



How to Build an Ensemble Of Machine
Learning Algorithms in R



Tune Machine Learning Algorithms in R
(random forest case study)



How To Estimate Model Accuracy in R
Using The Caret Package

Start Machine Learning



You can master applied Machine Learning
without math or fancy degrees.
Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Loving the Tutorials?

Iris Flowers Dataset

The [Machine Learning with R](#) EBook is where you'll find the **Really Good** stuff.
Photo by [Rick Ligthelm](#), some rights reserved.

The datasets library comes with base R which means you do not need to explicitly load the library. It includes `>> SEE WHAT'S INSIDE >>` that you can use.

You can load a dataset from this library by typing:

```
1 data(DataSetName)
```

For example, to load the very commonly used iris dataset:

```
1 data(iris)
```

To see a list of the datasets available in this library, you can type:

```
1 # list all datasets in the package
2 library(help = "datasets")
```

Some highlights datasets from this package that you could use are below.

Start Machine Learning

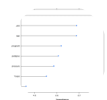
Never miss a tutorial:



Picked for you:



Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the Caret R
Package

Iris Flowers Dataset



How to Build an Ensemble Of Machine
Learning Algorithms in R
Description: Predict iris flower species from flower
features
Type: Multi-class classification

- Dimensions: 150 instances, 5 attributes



Tune Machine Learning Algorithms in R
(random forest case study)
Output: Numeric

- UCI Machine Learning Repository: [Description](#)

- Published accuracy results: [Summary](#)
How To Estimate Model Accuracy in R



Using The Caret Package

1 [iris flowers datasets](#)

2 `data(iris)`

3 `dim(iris)`

4 `levels(iris$Species)`

5 `head(iris)`

You will see:

Loving the Tutorials?

	Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
1					
2	1	5.1	3.5	1.4	setosa
3	2	4.9	3.0	1.4	setosa
4	3	4.7	3.2	1.3	setosa
5	4	4.6	3.1	1.5	setosa
6	5	5.0	3.6	1.4	setosa
7	6	5.4	3.9	1.7	setosa

Start Machine Learning

You can master applied Machine Learning
without math or fancy degrees.

Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Start Machine Learning

Never miss a tutorial:



- Description: Predict number of people employed from economic variables

Picked for you:

- Dimensions: 16 instances, 7 attributes



Your First Machine Learning Project in R

Step-By-Step

Output: Numeric

```
1 # Longley's Economic Regression Data
2 data(longley)
3 dim(longley)
4 head(longley)
```

You will see:



How to Build an Ensemble Of Machine

	GNPdeflator	GNP	Unemployed	Armed.
1	1947	83.0	234.289	235.6
2	1948	88.5	259.426	232.5
3	1949	88.2	258.054	368.2
4	1950	89.5	284.599	335.1
5	1951	96.2	328.975	209.9
6	1952	98.1	346.999	193.2



How To Estimate Model Accuracy in R
Using The Caret Package

Start Machine Learning



You can master applied Machine Learning
without math or fancy degrees.

Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Loving the Tutorials?

The [Machine Learning with R](#) EBook is
where you'll find the **Really Good** stuff.

>> SEE WHAT'S INSIDE

Library: mlbench

Start Machine Learning

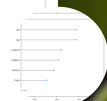
Never miss a tutorial:



Picked for you:



Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the caret R
Package



How to Build an Ensemble Of Machine
Learning Algorithms in R



Tune Machine Learning Algorithms in R
(random forest case study)

Soybean

Photo by United Soybean

How To Estimate Model Accuracy in R



Using The caret Package

from the manual for the library:



A collection of artificial and real-world machine learning
several data sets from the UCI repository.

Loving the Tutorials?

You can learn more about the *mlbench* library on the [mlbench CRAN page](#).

The Machine Learning with R EBook is

where you'll find the **Really Good Stuff** as follows:

```
1 install.packages("mlbench")
```

You can load the library as follows:

```
1 # load the library
2 library(mlbench)
```

To see a list of the datasets available in this library, you can type:

```
1 # list the contents of the library
2 library(help = "mlbench")
```

Some highlights datasets from this library that you could use are:

Start Machine Learning



You can master applied Machine Learning
without math or fancy degrees.
Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Start Machine Learning

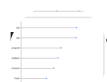
Never miss a tutorial:



Picked for you:



Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the Caret R
Package

1 Boston Housing Data

- Description: Predict the house price in Boston
- Type: Regression
- Dimensions: 506 instances, 14 attributes
- Inputs: Numeric
- Output: Numeric



How to Build an Ensemble Of Machine
Learning Algorithms in R



UCI Machine Learning Repository: Description
Tune Machine Learning Algorithms in R
(random forest case study)

```
# Boston Housing Data
data(BostonHousing)
dim(BostonHousing)
head(BostonHousing)
```



Using The Caret Package
see:

2	1	0.00632	18	2.31	0	0.538	6.575	65.2	4.										
3	2	0.02731	0	7.07	0	0.469	6.421	78.9	4.9671	2	242	17.8	396.90	9.14	21.6				
4	3	0.02729	0	7.07	0	0.469	7.185	61.1	4.9671	2	242	17.8	392.83	4.03	34.7				
5	4	0.03237	0	2.18	0	0.458	6.998	45.8	6.0622	3	222	18.7	394.63	2.94	33.4				
6	5	0.06905	0	2.18	0	0.458	7.147	54.2	6.0622	3	222	18.7	396.90	5.33	36.2				
7	6	0.02985	0	2.18	0	0.458	6.430	58.7	6.0622	3	222	18.7	394.12	5.21	28.7				

The [Machine Learning with R](#) EBook is
where you'll find the **Really Good** stuff.

>> SEE WHAT'S INSIDE

Start Machine Learning

You can master applied Machine Learning
without math or fancy degrees.
Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Wisconsin Breast Cancer Database

- Description: Predict whether a cancer is malignant or benign from biopsy details.
- Type: Binary Classification
- Dimensions: 699 instances, 11 attributes
- Inputs: Integer (Nominal)

Start Machine Learning


- Output: Categorical, 2 class labels
- UCI Machine Learning Repository: [Description](#)


Published accuracy results: [Summary](#)


```
1 # Wisconsin Breast Cancer Database
2 data(BreastCancer)
3 dim(BreastCancer)
4 levels(BreastCancer$Class)
5 head(BreastCancer)
```

You will see:

		Id	Cl.thickness	Cell.size	Cell.shape	Marg.adhesion	Epith.c.size	Bare.nuclei	Bl.cromatin
1		1000025	5	1	1	1	2	1	
2		1002945	5	4	4	1	2	1	
3		1015425	3	1	1	1	2	1	
4		1016277	6	8	8	1	2	1	
5		1017023	4	1	1	1	2	1	
6		1017122	8	10	10	1	2	1	

 [How to Build an Ensemble Of Machine Learning Algorithms in R](#)

 [Tune Machine Learning Algorithms in R \(random forest case study\)](#)

 [How To Estimate Model Accuracy in R Using The Caret Package](#)

Start Machine Learning

You can master applied Machine Learning **without math or fancy degrees**. Find out how in this *free* and *practical* course.

☐ I consent to receive information about services and special offers by email. For more information, see the [Privacy Policy](#).

[START MY EMAIL COURSE](#)

Loving the Tutorials?

Glass Identification Database

- The Machine Learning with R Book is where you'll find the **Really Good** stuff.
- Description: Predict the glass type from chemical properties.
- Type: [Categorical](#)
- Dimensions: 10 instances, 10 attributes
- Inputs: Numeric
- Output: Categorical, 7 class labels
- UCI Machine Learning Repository: [Description](#)
- Published accuracy results: [Summary](#)

```
1 # Glass Identification Database
2 data(Glass)
3 dim(Glass)
4 levels(Glass$Type)
5 head(Glass)
```

You will see:

		RI	Na	Mg	Al	Si	K	Ca	Ba	Fe	Type
1		1.52101	13.64	4.49	1.10	71.78	0.06	8.75	0.00	0.00	1
2		1.51761	13.89	3.60	1.36	72.73	0.48	7.83	0.00	0.00	1
3		1.51618	13.53	3.55	1.54	72.99	0.39	7.78	0.00	0.00	1
4		1.51766	13.21	3.69	1.29	72.61	0.57	8.22	0.00	0.00	1

[Start Machine Learning](#)

6	5	1.51742	13.27	3.62	1.24	73.08	0.55	8.07	0	0.00	1
7	6	1.51556	14.9941	5.41	1.62	72.97	0.64	8.07	0	0.26	1

Johns Hopkins University Ionsphere database

- Description: Predict high-energy structures in the atmosphere from antenna data.

Type: Classification

Picked for you!

- Dimensions: 351 instances, 35 attributes



Your First Machine Learning Project in R

Step-By-Step

Output: Categorical, 2 class labels

- UCI Machine Learning Repository: [Description](#)

- Published accuracy results: [Summary](#)

Feature Selection with the Caret R

Package

```
1 # Johns Hopkins University Ionsphere datab
2 data(Ionsphere)
3 dim(Ionsphere)
4 levels(Ionsphere$Class)
5 head(Ionsphere)
```

You will see:

	V1	V2	V3	V4	V5	V6	
1	1	0	0.99539	-0.05889	0.85243	0.02306	
2	1	0	1.00000	-0.18829	0.93035	-0.36156	
3	1	0	1.00000	-0.03365	1.00000	0.00485	
4	3	1	0.00000	-0.45161	1.00000	1.00000	
5	4	1	0.00000	-0.02401	0.94140	0.06531	
6	5	1	0.00000	-0.00592	-0.09924	-0.11949	
7	6	1	0.00000	-0.00592	-0.09924	-0.11949	
	V20	V21	V22	V23			
8	1	-0.32192	0.56971	-0.29674	0.36946	-0.4	
9	2	-1.00000	-0.13151	-0.45300	-0.18056	-0.3	
10	3	-0.08540	0.70887	-0.27502	0.43385	-0.1	
11	4	-0.54467	-0.69975	1.00000	0.00000	0.0	
12	5	-0.17813	0.05982	-0.35575	0.02309	-0.52879	0.03286
13	6	-0.05414	0.01838	0.03669	0.01519	0.00888	0.03513
14	6	-0.05414	0.01838	0.03669	0.01519	0.00888	0.03513

Start Machine Learning

You can master applied Machine Learning **without math or fancy degrees.**

Find out how in this *free* and *practical* course.

☐ I consent to receive information about services and special offers by email. For more information, see the [Privacy Policy](#).

[START MY EMAIL COURSE](#)

Loving the Tutorials?

The [Machine Learning with R](#) EBook is where you'll find the **Really Good** stuff.

>> SEE WHAT'S INSIDE

Pima Indians Diabetes Database

- Description: Predict the onset of diabetes in female Pima Indians from medical record data
- Type: Binary Classification

[Start Machine Learning](#)

• Dimensions: 768 instances, 9 attributes

• Inputs: Numeric

• Output: Categorical, 2 class labels

• Dataset Details: [Description](#)

• Published accuracy results: [Summary](#)

Picked for you:

```
1 # Pima Indians Diabetes Database
2 data(PimaIndiansDiabetes)
3 dim(PimaIndiansDiabetes)
4 levels(PimaIndiansDiabetes$diabetes)
5 head(PimaIndiansDiabetes)
```

You will see: Feature Selection with the Caret R

	Package	pregnant	glucose	pressure	triceps	insulin
1		1	6	148	72	35
2		1	6	148	72	35
3		2	1	85	66	29
4		3	8	183	64	0
5		4	1	89	66	23
6		5	0	137	40	35
7		6	5	116	74	0

Sonar, Mines vs. Rocks (random forest case study)
Description: Predict metal or rock returns from

• Type: Binary Classification

• Dimensions: 208 instances, 61 attributes

• Inputs: Numeric

• Output: Categorical, 2 class labels

• UCI Machine Learning Repository: [Description](#)

• Published accuracy results: [Summary](#)

```
1 # Sonar, Mines vs. Rocks
2 data(Sonar)
3 dim(Sonar)
4 levels(Sonar$Class)
5 head(Sonar)
```

You will see: >> SEE WHAT'S INSIDE

		V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13
1		1	0.0200	0.0371	0.0428	0.0207	0.0954	0.0986	0.1539	0.1601	0.3109	0.2111	0.1609	0.1582
2		1	0.0200	0.0371	0.0428	0.0207	0.0954	0.0986	0.1539	0.1601	0.3109	0.2111	0.1609	0.1582
3		2	0.0453	0.0523	0.0843	0.0689	0.1183	0.2583	0.2156	0.3481	0.3337	0.2872	0.4918	0.6552
4		3	0.0262	0.0582	0.1099	0.1083	0.0974	0.2280	0.2431	0.3771	0.5598	0.6194	0.6333	0.7060
5		4	0.0100	0.0171	0.0623	0.0205	0.0205	0.0368	0.1098	0.1276	0.0598	0.1264	0.0881	0.1992
6		5	0.0762	0.0666	0.0481	0.0394	0.0590	0.0649	0.1209	0.2467	0.3564	0.4459	0.4152	0.3952
7		6	0.0286	0.0453	0.0277	0.0174	0.0384	0.0990	0.1201	0.1833	0.2105	0.3039	0.2988	0.4250
8			V23	V24	V25	V26	V27	V28	V29	V30	V31	V32	V33	V34
9		1	0.4328	0.5550	0.6711	0.6415	0.7104	0.8080	0.6791	0.3857	0.1307	0.2604	0.5121	0.7547
10		2	0.3957	0.3914	0.3250	0.3200	0.3271	0.2767	0.4423	0.2028	0.3788	0.2947	0.1984	0.2341
11		3	0.4293	0.3648	0.5331	0.2413	0.5070	0.8533	0.6036	0.8514	0.8512	0.5045	0.1862	0.2709
12		4	0.5556	0.4846	0.3140	0.5334	0.5256	0.2520	0.2090	0.3559	0.6260	0.7340	0.6120	0.3497
13		5	0.5730	0.5399	0.3161	0.2285	0.6995	1.0000	0.7262	0.4724	0.5103	0.5459	0.2881	0.0981
14		6	0.5890	0.2872	0.2043	0.5782	0.5389	0.3750	0.3411	0.5067	0.5580	0.4778	0.3299	0.2198
15			V45	V46	V47	V48	V49	V50	V51	V52	V53	V54	V55	V56
16		1	0.2641	0.1386	0.1051	0.1343	0.0383	0.0324	0.0232	0.0027	0.0065	0.0159	0.0072	0.0167
17		2	0.0621	0.0203	0.0530	0.0742	0.0409	0.0061	0.0125	0.0084	0.0089	0.0048	0.0094	0.0191
18		3	0.2111	0.0176	0.1348	0.0744	0.0130	0.0106	0.0033	0.0232	0.0166	0.0095	0.0180	0.0244
19		4	0.4295	0.3654	0.2655	0.1576	0.0681	0.0294	0.0241	0.0121	0.0036	0.0150	0.0085	0.0073
20		5	0.0692	0.0528	0.0357	0.0085	0.0230	0.004						
21		6	0.1192	0.1089	0.0623	0.0494	0.0264	0.008						

Start Machine Learning

You can master applied Machine Learning
without math or fancy degrees.

Find out how in this *free* and *practical* course.

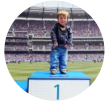
☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

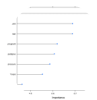
Never miss a tutorial:



Picked for you:



Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the Caret R
Package



How to Build an Ensemble Of Machine
Learning Algorithms in R

Soybean Database



Description: Predict problems with soybean cr
Tune Machine Learning Algorithms in R
Type: Multi-Class Classification
(random forest case study)
Dimensions: 683 instances, 26 attributes

- Inputs: Integer (Nominal)

How To Estimate Model Assumptions in R



Machine Learning Repository: Description

```
1 # Soybean Database
2 data(Soybean)
3 dim(Soybean)
4 levels(Soybean$Class)
5 head(Soybean)
```

Loving the Tutorials?

You will see:

The Machine Learning with R EBook is

1	where you'll find the Really Good stuff											
2	1	diaporthe-stem-canker	6	0	2	1	0	1	1	1	0	
3	2	diaporthe-stem-canker	4	0	2	1	0	2	0	2	1	
4	3	diaporthe-stem-canker	3	0	2	1	0	1	0	2	1	
5	4	diaporthe-stem-canker	3	0	2	1	0	1	0	2	0	
6	5	diaporthe-stem-canker	6	0	2	1	0	2	0	1	0	
7	6	diaporthe-stem-canker	5	0	2	1	0	3	0	1	0	
8		leaf.malf	leaf.mild	stem	lodging	stem.cankers	canker.lesion	fruiting.bodies	ext.decay	myco		
9	1	0	0	1	1	3		1	1	1		
10	2	0	0	1	0	3		1	1	1		
11	3	0	0	1	0	3		0	1	1		
12	4	0	0	1	0	3		0	1	1		
13	5	0	0	1	0	3		1	1	1		
14	6	0	0	1	0	3		0	1	1		
15		seed.discolor	seed.size	shriveling	roots							
16	1	0	0	0	0							
17	2	0	0	0	0							
18	3	0	0	0	0							
19	4	0	0	0	0							
20	5	0	0	0	0							
21	6	0	0	0	0							

Start Machine Learning

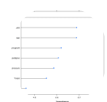
Never miss a tutorial:



Picked for you:



Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the Caret R
Package

Library: **AppliedPredictiveModeling**



How to Build an Ensemble Of Machine
Learning Algorithms in R



Tune Machine Learning Algorithms in R
(random forest case study)



How To Estimate Model Accuracy in R
Using The Caret Package

Loving the Tutorials?

The [Machine Learning with R](#) EBook is
where you'll find the *Really Good* stuff.

>> SEE WHAT'S INSIDE

Start Machine Learning

You can master applied Machine Learning
without math or fancy degrees.
Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Abalone Dataset

Photo by [MAURO CATEB](#), some rights reserved.

Many books that use R also include their own R library that provides all of the code and datasets used in the book.

The excellent book [Applied Predictive Modeling](#) has its own library called *AppliedPredictiveModeling*.

If not installed, you can install this library as follows:

Start Machine Learning


```
1 install.packages("AppliedPredictiveModeling")
```

Never miss a tutorial:

You can load the library as follows:



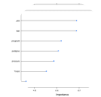
```
1 # load the library
2 library(AppliedPredictiveModeling)
```

Picked for you:

To see a list of the datasets available in this library, you can type:

```
1 # List the contents of the library
2 library(help = "AppliedPredictiveModeling")
```

One highlight datasets from this library that you could use is:



Feature Selection with the Caret R
Package



How to Build an Ensemble Of Machine
Learning Algorithms in R



Tune Machine Learning Algorithms in R
(random forest case study)



How To Estimate Model Accuracy in R
Using The Caret Package

Start Machine Learning

You can master applied Machine Learning
without math or fancy degrees.
Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Abalone Data

Loving the Tutorials?

- Description: Predict abalone age from abalone measurement data.
- Type: [Regression With RFE](#) [Classification](#)
- Dimensions: 4177 instances, 9 attributes where you'll find the **Really Good** stuff.
- Input: Numerical and categorical
- Output: [SEE WHAT'S INSIDE](#)
- UCI Machine Learning Repository: [Description](#)

```
1 # Abalone Data
2 data(abalone)
3 dim(abalone)
4 head(abalone)
```

You will see:

	Type	LongestShell	Diameter	Height	WholeWeight	ShuckedWeight	VisceraWeight	ShellWeight	Rings	
1	1	M	0.455	0.365	0.095	0.5140	0.2245	0.1010	0.150	1
2	1	M	0.350	0.265	0.090	0.2255	0.0995	0.0485	0.070	1
3	2	F	0.530	0.420	0.135	0.6770	0.2565	0.1415	0.210	5
4	3	M	0.440	0.365	0.125	0.5160	0.2155	0.1140	0.155	10
5	4	I	0.330	0.255	0.080	0.2050	0.0895	0.0395	0.055	10
6	5	I	0.425	0.300	0.095	0.3515	0.1410	0.0775	0.120	10

Summary

Start Machine Learning

In this post you discovered that you do not need to collect or load your own data in order to practice machine learning in R.



You learned about 3 different libraries that provide sample machine learning datasets that you can use:

Picked for you:

- [mlbench library](#)
- [Applied Predictive Modeling library](#)
- [Your First Machine Learning Project in R Step-By-Step](#)

You also discovered 10 specific standard machine learning datasets that you can use to practice classification and regression machine learning techniques.

- [Feature Selection with the Caret R Package](#)
- [flowers datasets \(multi-class classification\)](#)
- [Longley's Economic Regression Data \(regression\)](#)
- [Boston Housing Data \(regression\)](#)
- [Wisconsin Breast Cancer Database \(binary classification\)](#)
- [Plant-Cover Class Identification Database \(multi-class classification\)](#)
- [Johns Hopkins University Ionosphere database \(binary classification\)](#)
- [Indian Vowel Character Recognition Database \(binary classification\)](#)
- [Random Forests R package \(binary classification\)](#)
- [Soybean Database \(multi-class classification\)](#)
- [Abalone Data \(regression or classification\)](#)
- [Using The Caret Package](#)

Start Machine Learning

You can master applied Machine Learning **without math or fancy degrees**. Find out how in this *free* and *practical* course.

☐ I consent to receive information about services and special offers by email. For more information, see the [Privacy Policy](#).

[START MY EMAIL COURSE](#)

Next Step

Did you try out these recipes? [The Machine Learning with R EBook](#) is where you'll find the **Really Good** stuff.

1. Start your R interactive environment.
2. Type `>> SEE WHAT'S INSIDE` recipes above and try them out.
3. Use the built-in help in R to learn more about the functions used.

Do you have a question. Ask it in the comments and I will do my best to answer it.

Discover Faster Machine Learning in R!

Develop Your Own Models in Minutes

...with just a few lines of R code

Discover how in my new Ebook:
[Machine Learning Mastery With R](#)

[Start Machine Learning](#)

Never miss a tutorial:

Machine Learning Mastery



Get started, build a predictive model, and work through projects step-by-step

Picked for you:

Jason Brownlee



Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the Caret R
Package



How to Build an Ensemble Of Machine
Learning Algorithms in R

Tweet

Share

Share



Tune Machine Learning Algorithms in R
(random forest case study)



How To Estimate Model Accuracy in R
Using The Caret Package

Covers **self-study tutorials** and **end-to-end projects** like:
Loading data, visualization, build models, tuning, and much more...

Finally Bring Machine Learning To Your Own Projects

Skip the Academics. Just Results.

SEE WHAT'S INSIDE

Start Machine Learning



You can master applied Machine Learning
without math or fancy degrees.
Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

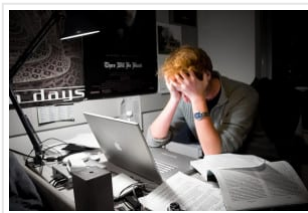
Loving the Tutorials? More On This Topic

The Machine Learning with R EBook is
where you'll find the **Really Good** stuff.

>> SEE WHAT'S INSIDE



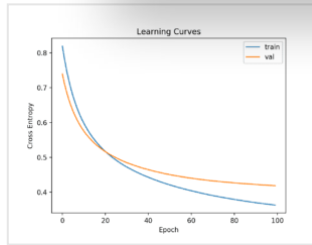
How To Implement The Decision Tree Algorithm From...



Machine Learning for Developers

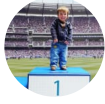
Start Machine Learning

Never miss a tutorial:

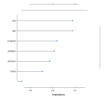


Picked for you:

TensorFlow 2 Tutorial: Get Started in Deep Learning...



Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the Caret R
Package



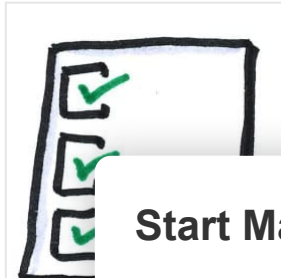
How to Build an Ensemble Of Machine
Learning Algorithms in R



Tune Machine Learning Algorithms in R
(random forest case study)



How To Estimate Model Accuracy in R
Using The Caret Package



How to Use a Machine Learning Model



The Machine Learning



How To Improve Deep Learning Performance

Loving the Tutorials?

The [Machine Learning with R](#) EBook is where you'll find the **Really Good** stuff.

>> SEE WHAT'S INSIDE



About Jason Brownlee

Jason Brownlee, PhD is a machine learning specialist who teaches developers how to get results with modern machine learning methods via hands-on tutorials.

[View all posts by Jason Brownlee →](#)

< [How To Load Your Machine Learning Data Into R](#)

[Spot Check Machine Learning Algorithms in R \(algorithms to try on your next project\)](#) >

21 Responses to *Machine Learning Datasets in R (10 datasets you can use right now)*

[Start Machine Learning](#)

Never miss a tutorial:

Rotimi February 16, 2016 at 6:11 am #

REPLY ↩



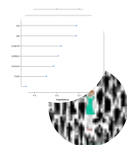
Picked for you:



Rotimi February 16, 2016 at 6:11 am #

REPLY ↩

Your First Machine Learning Project in R
Step-By-Step
Great post! Thank you sir



Feature Selection with the Caret R Package
Asia December 2, 2016 at 12:35 pm #



Thanks! I'm looking for regression datasets
How to Build an Ensemble Of Machine Learning Algorithms in R
... you wrote that the set is for regression and in reading.



Tune Machine Learning Algorithms in R (random forest case study)
Jason Brownlee December 3, 2016 at 8:...



Thanks Asia, I have fixed that up.
How To Estimate Model Accuracy in R Using The Caret Package



V Malsoru May 13, 2017 at 7:06 am #

I Install R and practiced some algorithms such as Apriori using "arules" packages, but how to install "mlbench" package? the following datasets

Loving the Tutorials?
"Boston Housing Data (regression)
The Machine Learning with R Book is
Wisconsin Breast Cancer Database (binary classification)
where you find the **Really Good stuff!**
Glass Identification Database (multi-class classification)
Johns >> SEE WHAT'S INSIDE are database (binary classification)
Pima Indians Diabetes Database (binary classification)
Sonar, Mines vs. Rocks (binary classification)
Soybean Database (multi-class classification)
Abalone Data (regression or classification)". Please suggest.



Jason Brownlee May 14, 2017 at 7:21 am #

REPLY ↩

You can install the mlbench package as follows:

```
1 install.packages(mlbench)
```

Malsoru May 13, 2017 at 7:49 am #

Start Machine Learning



You can master applied Machine Learning
without math or fancy degrees.
Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Start Machine Learning

Never miss a tutorial: To run cancer datasets, which packages are needed, could you please suggest.



Jason Brownlee May 14, 2017 at 7:21 am #

REPLY ↩

Picked for you:

The mlbench package.



Your First Machine Learning Project in R
Step-By-Step

REPLY ↩



Malsoru June 14, 2017 at 5:52 pm #

Feature Selection with the Caret R
Pima Indians Diabetes Database (binary classification)
Package

Could You Please suggest one more "Diabetes" da

two more or less than Pima Indians Diabetes Data

betes Database (binary classification). But i need



How to Build an Ensemble Of Machine
Learning Algorithms in R



June Machine Learning with R at 8:44 a
Random forest case study)

Perhaps you can search kaggle or the



How To Estimate Model Accuracy in R
Using The Caret Package

Nate George January 27, 2018 at 2:31 pm #

This has got to be the only post of yours w
seem to be random.

Loving the Tutorials?

The Machine Learning with R EBook is
where you'll find the **Really Good** stuff.



Jason Brownlee January 28, 2018 at 8:21 am #

REPLY ↩

>> SEE WHAT'S INSIDE



Nate George March 9, 2018 at 9:16 am #

REPLY ↩

Ha! I just thought it was funny.



Nate George January 27, 2018 at 2:33 pm #

REPLY ↩

Also, it's `install.packages()`, not `install.library()`



Jason Brownlee January 28, 2018 at 8:2

Start Machine Learning

You can master applied Machine Learning
without math or fancy degrees.

Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Thanks, fixed.
Never miss a tutorial:



GEORGE MASON UNIVERSITY September 18, 2018 at 6:35 am #

REPLY ↩

Picked for you:

May I know how to apply central limit theorem to large multivariate dataset



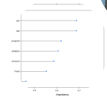
Your First Machine Learning Project in R

Step-By-Step



Jason Brownlee September 18, 2018 at 2:14 pm #

REPLY ↩



Feature Selection with the Caret R
Package
What do you mean exactly?



How to Build an Ensemble Of Machine

Learning Algorithms in R
October 8, 2018 at 4:42 am #

Sir i wanna work with age data-set to find



Tune Machine Learning Algorithms in R
I am unable to find the csv file of age data-set..
(random forest case study)

Will you provide me a link so that i can work in r



How To Estimate Model Accuracy in R

Using The Caret Package



Jason Brownlee October 8, 2018 at 9:28

This is a common question that I answer

https://machinelearningmastery.com/faq/single-faq/where-can-i-get-a-dataset-on-___

Loving the Tutorials?



The Machine Learning with R EBook is
Machine learning July 10, 2021 at 8:23 pm #
Here you'll find the **Really Good** stuff.

REPLY ↩

Machine learning is the revolution in tech industry.

>> SEE WHAT'S INSIDE



Jason Brownlee July 11, 2021 at 5:38 am #

REPLY ↩

Sure is!

Leave a Reply

Start Machine Learning



You can master applied Machine Learning
without math or fancy degrees.
Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Start Machine Learning

Never miss a tutorial:



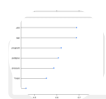
Picked for you:



Your First Machine Learning Project in R
Step-By-Step

1

Name (required)



Feature Selection with the Caret R
Package

Email (will not be published)



How to Build an Ensemble Of Machine
Learning Algorithms in R



Tune Machine Learning Algorithms in R
(random forest case study)

Welcome!

I'm Jason Brownlee PhD

and I **help developers** get results with

[Read more](#)

How To Estimate Model Accuracy in R



Using The Caret Package

Start Machine Learning



You can master applied Machine Learning
without math or fancy degrees.

Find out how in this *free* and *practical* course.

Email Address

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).


START MY EMAIL COURSE

Loving the Tutorials?

The Machine Learning with R EBook is
where you'll find the *Really Good* stuff.
Enhance your AI Experimentation

Model
experimental process
that's tough to get right.
Crack the code with SigOpt.

>> SEE WHAT'S INSIDE

 SIGOPT

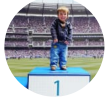
Design, explore, optimize AI models faster & easier.

Start Machine Learning

Never miss a tutorial:



Picked for you:



Your First Machine Learning Project in R
Step-By-Step



Feature Selection with the Caret R
Package



How to Build an Ensemble Of Machine
Learning Algorithms in R



Tune Machine Learning Algorithms in R
(random forest case study)



How To Estimate Model Accuracy in R
Using The Caret Package

Start Machine Learning



You can master applied Machine Learning
without math or fancy degrees.
Find out how in this *free* and *practical* course.

☐ I consent to receive information about
services and special offers by email. For more
information, see the [Privacy Policy](#).

START MY EMAIL COURSE

Loving the Tutorials?

© 2022 Machine Learning Mastery. All Rights Reserved.

[LinkedIn](#) | [Twitter](#) | [Facebook](#) | [Newsletter](#) | [RSS](#)
The Machine Learning with R EBook is

where you'll find the **Really Good** stuff.
[Privacy](#) | [Disclaimer](#) | [Terms](#) | [Contact](#) | [Sitemap](#) | [Search](#)

>> SEE WHAT'S INSIDE

Start Machine Learning