



# BLOG



If you have an idea, why not get your project started in 2020.

We have developed 5000+ projects for our 950+ clients since 2008



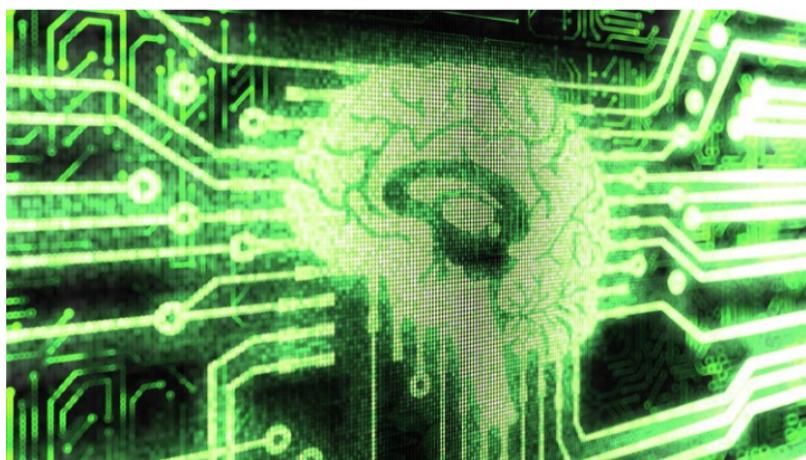
We have successfully deployed 5000+ projects for our 900+ clients. Contact us now!

## Random Forest Analysis in ML and when to use it

Posted by [Anurag](#)

Aug 17, 2018 11:00:00 PM

 Tweet  Share



In machine learning, the random forest algorithm is also known as the random forest classifier. It is a very popular [classification algorithm](#). One of the most interesting things about this algorithm is that it can be used as both [classification and regression algorithm](#). The random forest algorithm is an algorithm for machine learning, which is a forest. We know the forest consists of trees. The trees being mentioned here are [decision trees](#). Therefore, the random forest algorithm comprises a random collection of a forest tree. It is an addition to the decision tree algorithm. So basically, what a random forest algorithm does is that it creates multiple decision trees and merges them together to obtain a more stable and accurate prediction. In general, the more trees in the forest, the more robust would be

FIRST NAME

BUSINESS EMAIL\* PHONE NUMBER

DESCRIPTION

**SUBMIT**

### Recent Posts

[Know the difference between IoT and M2M](#)

[Mobile payments: Past, Present and Future](#)

[Importance of Blockchain in the healthcare industry](#)

[Modern software development with agile methodologies](#)

[Everything you need to know about lean startup model](#)

[How beacon technology will enhance productivity](#)

[Retail app development predictions & tendencies in the upcoming future](#)

[Using IoT to improve worker safety](#)

the prediction and thus higher accuracy.

In order to completely understand the nature of the random forest algorithm, it is important that you first understand the concept of a decision tree classifier.

## Decision Trees

Decision Tree algorithm is an algorithm that can be used to solve regression as well as classification problems. The main objective of the creation of a decision tree is to build a training model. This training model is used to predict the value or class of the recipient variables. The level of understanding of the decision trees algorithm is much easier than the other classification algorithms.

In the random forest classifier, every decision tree forecasts a response for an occurrence and the endmost response is decided through voting. On contrary, in classification, the response received by majority voting of Decision Tree is the final response and in regression, the final response is the average of all the responses.

## Why use Random Forest Algorithm

To answer this question, we will suggest some of its advantages which will clear your mind why use Random Forest Algorithm in machine learning.

Random forest algorithm can be used for both classifications and regression task.  
It provides higher accuracy.  
Random forest classifier will handle the missing values and maintain the accuracy of a large proportion of data.  
If there are more trees, it won't allow overfitting trees in the model.  
It has the power to handle a large data set with higher dimensionality

## How does it work

In the random forest, we grow multiple trees in a model. To classify a new object based on new attributes each tree gives a classification and we say that tree votes for that class. The forest chooses the classifications having the most votes of all the other trees in the forest and takes the average difference from the output of different trees. In general, Random Forest built multiple trees and combines them together to get a more accurate result.

While creating random trees it split into different nodes or subsets. Then it searches for the best outcome from the random subsets. This results in the better model of the algorithm. Thus, in a random forest, only the random subset is taken into consideration.

To give you a clear idea about the working of a random tree, let us see an example.

Suppose we formed a thousand random trees to form the random forest to detect a 'hand'. Each random forest will predict the different outcomes or the class for the same test features. A small subset of the forest will look at the random set of features, for example, hand or fingers. Suppose some hundred random decision trees predict some unique targets such as thumb, fingers or human. Then the votes of the finger are calculated out of a hundred random decisions and also the votes of thumb and human. If votes of the finger are higher, then the final random forest will return the finger as a predicted target. This type of voting is called majority voting. The same applies to the rest of the fingers of the hand, if the algorithm predicts the rest of the fingers to be fingers of a hand, then the high-level decision tree can vote that an image is a 'hand'. This is why the random forest is also known as Ensemble machine learning algorithm.

In machine learning, this algorithm helps in several ways and most of the applications are underway. Below we have discussed the use of this algorithm in machine learning in a few sectors.

Future development of the business world with robotics

Why off-the-shelf software is not ideal for business success

## Recent Posts

Know the difference between IoT and M2M

Mobile payments: Past, Present and Future

Importance of Blockchain in the healthcare industry

Modern software development with agile methodologies

Everything you need to know about lean startup model

How beacon technology will enhance productivity

Retail app development predictions & tendencies in the upcoming future

Using IoT to improve worker safety

Future development of the business world with robotics

Why off-the-shelf software is not ideal for business success

## Most Popular

10 steps: How to Create a Successful Mobile Application?

Top 10 Cloud Computing Examples and Uses

5 Applications of Regression Analysis in Business

Top 5 Cloud Platforms and Solutions to Choose From

Top 11 Tech Trends and Solutions in the Automobile Industry

# When to use Random Forest Analysis

There are several applications where the random forest can be applied. We will discuss some of the sectors where random forest can be applied. We will also look closer when the random forest analysis comes into the role.

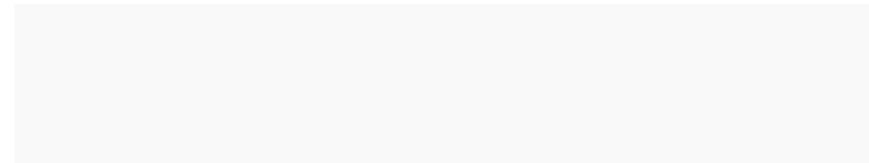
**Banking Sector:** The banking sector consists of most users. There are many loyal customers and also fraud customers. To determine whether the customer is a loyal or fraud, Random forest analysis comes in. With the help of a random forest algorithm in machine learning, we can easily determine whether the customer is fraud or loyal. A system uses a set of a random algorithm which identifies the fraud transactions by a series of the pattern.

**Medicines:** Medicines needs a complex combination of specific chemicals. Thus, to identify the great combination in the medicines, Random forest can be used. With the help of machine learning algorithm, it has become easier to detect and predict the drug sensitivity of a medicine. Also, it helps to identify the patient's disease by analyzing the patient's medical record.

**Stock Market:** Machine learning also plays role in the stock market analysis. When you want to know the behavior of the stock market, with the help of Random forest algorithm, the behavior of the stock market can be analyzed. Also, it can show the expected loss or profit which can be produced while purchasing a particular stock.

**E-Commerce:** When you will find it difficult to recommend or suggest what type of products your customer should see. This is where you can use a random forest algorithm. Using a machine learning system, you can suggest the products which will be more likely for a customer. Using a certain pattern and following the product's interest of a customer, you can suggest similar products to your customers.

Topics: [Machine Learning](#), [Random Forest Analysis](#)



[About Us](#)

[Portfolio](#)

[Careers](#)

[Resources](#)

[Contact Us](#)



**New Generation Applications Pvt Ltd.** Founded in June 2008, New Generation Applications Pvt Ltd. is a company specializing in innovative IT solutions. We lead the way in every modern technology and help business succeed digitally. Over our 10 years of experience we have worked with all types of businesses from healthcare to entertainment. In our journey as an technology innovators we got opportunities to work on some of the most complex solutions and projects.

#### Corporate Office

10th Floor, Summit Building, Vibhuti Khand, Gomti Nagar, Lucknow-226010, India 0522-4080333, +1 888-203-5812

#### Mumbai Office

704 Bliss Towers, Off Link Road, Malad(W), Mumbai - 400064, India

#### New York Office

57 West 57th Street, 3rd and 4th Floors, New York, 10019, USA

#### Resources

Augmented Reality : E-Book  
Chatbot E-book  
Travel E-book  
Retail E-book  
E-Commerce E-book  
Big Data E-book  
Mobile App Marketing E-book  
Finance & Banking E-book  
Healthcare E-book  
NoSQL vs SQL  
Mobile App Framework  
Cloud Platform  
Xiffe-HRMS: Whitepaper  
IoT: Whitepaper  
Web App: Whitepaper  
Mobile App: Whitepaper

#### Technology

IoT  
Machine Learning  
Mobile App  
Web App  
Artifical Intelligence  
Natural Language Processing  
Cloud Computing  
Big Data  
Virtual Reality  
Predictive Analytics  
Augmented Reality  
Ruby on Rails  
iOS  
Drupal  
Android  
Enterprise Solutions

#### Our Work

Baby Development  
Biz Parking  
GeoConnect  
MetNav  
MyEmploysure  
MyHomey  
Map Alerter  
Songwriter's Pad Android  
Songwriter's Pad iOS  
Anatex  
Plastic Surgerey  
Flying Avatar  
Speech with Milo  
Goddess Tarot  
VidLib  
Forex Trade Calculator

#### Industry

Gaming  
Learning & Education  
Banking & Finance  
Communication Services  
Media & Entertainment  
M-Governance  
Manufacturing & Automotives  
E-Commerce  
Retail  
Resources & Utilities  
Transportation & Logistics  
Healthcare  
Real Estate  
Hospitality & Leisure  
Publishing  
FMCG