

## Arduino Naive Bayes Classifier Library

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## 1 Hierarchical Index

### 1.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

<b>Class</b>	<b>2</b>
<b>Classifier</b>	<b>3</b>
<b>NaiveBayesClassifier</b>	<b>5</b>
<b>Feature</b>	<b>4</b>
<b>Learner</b>	<b>4</b>
<b>NaiveBayesClassifier</b>	<b>5</b>
<b>Sample</b>	<b>7</b>

## 2 Class Index

### 2.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

<b>Class</b>	
<b>Arduino - Naive Bayes Library</b>	<b>2</b>
<b>Classifier</b>	
<b>Arduino - Naive Bayes Library</b>	<b>3</b>

<b>Feature</b>	
<b>Arduino - Naive Bayes Library</b>	<b>4</b>
<b>Learner</b>	
<b>Arduino - Naive Bayes Library</b>	<b>4</b>
<b>NaiveBayesClassifier</b>	
<b>Arduino - Naive Bayes Library</b>	<b>5</b>
<b>Sample</b>	
<b>Arduino - Naive Bayes Library</b>	<b>7</b>

## 3 File Index

### 3.1 File List

Here is a list of all files with brief descriptions:

<b>Class.cpp</b>	<b>7</b>
<b>Class.h</b>	<b>8</b>
<b>Classifier.cpp</b>	<b>9</b>
<b>Classifier.h</b>	<b>9</b>
<b>Feature.cpp</b>	<b>10</b>
<b>Feature.h</b>	<b>10</b>
<b>Learner.cpp</b>	<b>11</b>
<b>Learner.h</b>	<b>12</b>
<b>NaiveBayesClassifier.cpp</b>	<b>13</b>
<b>NaiveBayesClassifier.h</b>	<b>13</b>
<b>Sample.cpp</b>	<b>14</b>
<b>Sample.h</b>	<b>15</b>

## 4 Class Documentation

### 4.1 Class Class Reference

```
#include <Class.h>
```

#### Public Member Functions

- [Class](#) (unsigned char [code](#))

#### Private Attributes

- unsigned char [code](#)

#### 4.1.1 Detailed Description

Arduino - Naive Bayes Library.

[Class.h](#)

[Class](#) class.

Author

Dalmir da Silva [dalmirdasilva@gmail.com](mailto:dalmirdasilva@gmail.com)

Definition at line 14 of file [Class.h](#).

#### 4.1.2 Constructor & Destructor Documentation

##### 4.1.2.1 `Class::Class ( unsigned char code )`

Definition at line 3 of file [Class.cpp](#).

#### 4.1.3 Member Data Documentation

##### 4.1.3.1 `unsigned char Class::code` `[private]`

Definition at line 16 of file [Class.h](#).

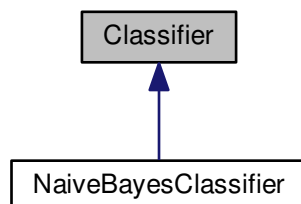
The documentation for this class was generated from the following files:

- [Class.h](#)
- [Class.cpp](#)

## 4.2 Classifier Class Reference

```
#include <Classifier.h>
```

Inheritance diagram for Classifier:



#### Public Member Functions

- virtual [Class](#) [classify](#) ([Sample](#) \*sample)=0

#### 4.2.1 Detailed Description

Arduino - Naive Bayes Library.

[Classifier.h](#)

Abstract classifier.

##### Author

Dalmir da Silva [dalmirdasilva@gmail.com](mailto:dalmirdasilva@gmail.com)

Definition at line 14 of file [Classifier.h](#).

#### 4.2.2 Member Function Documentation

4.2.2.1 `virtual Class Classifier::classify ( Sample * sample ) [pure virtual]`

Implemented in [NaiveBayesClassifier](#).

The documentation for this class was generated from the following file:

- [Classifier.h](#)

### 4.3 Feature Class Reference

```
#include <Feature.h>
```

#### 4.3.1 Detailed Description

Arduino - Naive Bayes Library.

[Feature.h](#)

[Feature](#) class.

##### Author

Dalmir da Silva [dalmirdasilva@gmail.com](mailto:dalmirdasilva@gmail.com)

Definition at line 14 of file [Feature.h](#).

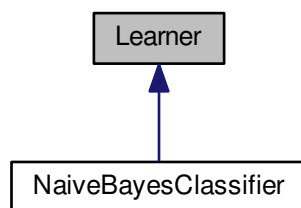
The documentation for this class was generated from the following file:

- [Feature.h](#)

### 4.4 Learner Class Reference

```
#include <Learner.h>
```

Inheritance diagram for Learner:



#### Public Member Functions

- virtual void [learn](#) ([Sample](#) \*sample)=0

##### 4.4.1 Detailed Description

Arduino - Naive Bayes Library.

[Learner.h](#)

Abstract learner.

#### Author

Dalmir da Silva [dalmirdasilva@gmail.com](mailto:dalmirdasilva@gmail.com)

Definition at line 16 of file [Learner.h](#).

##### 4.4.2 Member Function Documentation

4.4.2.1 virtual void [Learner::learn](#) ( [Sample](#) \* *sample* ) [pure virtual]

Implemented in [NaiveBayesClassifier](#).

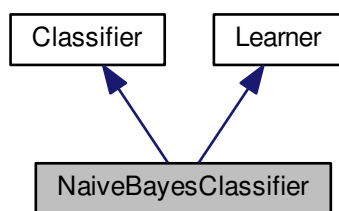
The documentation for this class was generated from the following file:

- [Learner.h](#)

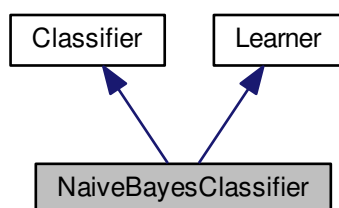
## 4.5 NaiveBayesClassifier Class Reference

```
#include <NaiveBayesClassifier.h>
```

Inheritance diagram for NaiveBayesClassifier:



Collaboration diagram for NaiveBayesClassifier:



#### Public Member Functions

- [NaiveBayesClassifier](#) ()
- virtual void [learn](#) ([Sample](#) \*sample)
- virtual [Class](#) [classify](#) ([Sample](#) \*sample)

#### 4.5.1 Detailed Description

Arduino - Naive Bayes Library.

[NaiveBayesClassifier.h](#)

Naive Bayes [Classifier](#) implementation.

#### Author

Dalmir da Silva [dalmirdasilva@gmail.com](mailto:dalmirdasilva@gmail.com)

Definition at line 16 of file [NaiveBayesClassifier.h](#).

#### 4.5.2 Constructor & Destructor Documentation



#### 4.5.2.1 NaiveBayesClassifier::NaiveBayesClassifier ( )

Definition at line 3 of file [NaiveBayesClassifier.cpp](#).

### 4.5.3 Member Function Documentation

#### 4.5.3.1 Class NaiveBayesClassifier::classify ( Sample \* sample ) [virtual]

Implements [Classifier](#).

Definition at line 9 of file [NaiveBayesClassifier.cpp](#).

#### 4.5.3.2 void NaiveBayesClassifier::learn ( Sample \* sample ) [virtual]

Implements [Learner](#).

Definition at line 6 of file [NaiveBayesClassifier.cpp](#).

The documentation for this class was generated from the following files:

- [NaiveBayesClassifier.h](#)
- [NaiveBayesClassifier.cpp](#)

## 4.6 Sample Class Reference

```
#include <Sample.h>
```

### 4.6.1 Detailed Description

Arduino - Naive Bayes Library.

[Sample.h](#)

Abstract classifier.

#### Author

Dalmir da Silva [dalmirdasilva@gmail.com](mailto:dalmirdasilva@gmail.com)

Definition at line 14 of file [Sample.h](#).

The documentation for this class was generated from the following file:

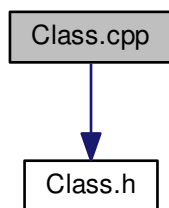
- [Sample.h](#)

## 5 File Documentation

### 5.1 Class.cpp File Reference

```
#include "Class.h"
```

Include dependency graph for Class.cpp:

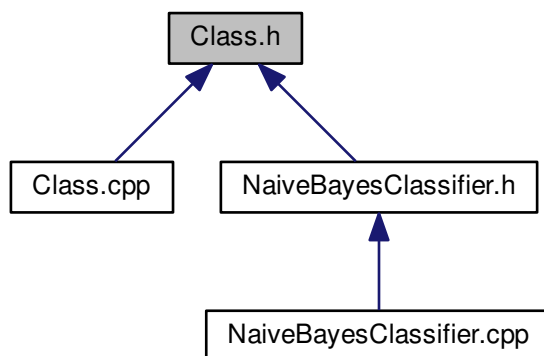


## 5.2 Class.cpp

```
00001 #include "Class.h"
00002
00003 Class::Class(unsigned char code) : code(code) {
00004 }
```

## 5.3 Class.h File Reference

This graph shows which files directly or indirectly include this file:



## Classes

- class [Class](#)

## 5.4 Class.h

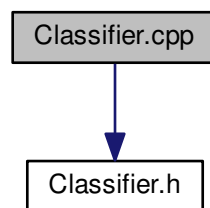
```
00001
00011 #ifndef __ARDUINO_NAIVE_BAYES_CLASS_H__
00012 #define __ARDUINO_NAIVE_BAYES_CLASS_H__ 1
00013
```

```
00014 class Class {
00015
00016     unsigned char code;
00017
00018 public:
00019
00020     Class(unsigned char code);
00021 };
00022
00023 #endif // __ARDUINO_NAIVE_BAYES_CLASS_H__
```

## 5.5 Classifier.cpp File Reference

```
#include "Classifier.h"
```

Include dependency graph for Classifier.cpp:

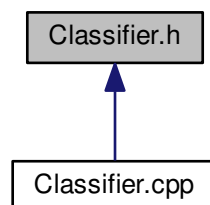


## 5.6 Classifier.cpp

```
00001 #include "Classifier.h"
```

## 5.7 Classifier.h File Reference

This graph shows which files directly or indirectly include this file:



### Classes

- class [Classifier](#)

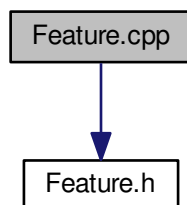
## 5.8 Classifier.h

```
00001
00011 #ifndef __ARDUINO_NAIVE_BAYES_CLASSIFIER_H__
00012 #define __ARDUINO_NAIVE_BAYES_CLASSIFIER_H__ 1
00013
00014 class Classifier {
00015
00016 public:
00017
00018     virtual Class classify(Sample *sample) = 0;
00019 };
00020
00021 #endif // __ARDUINO_NAIVE_BAYES_CLASSIFIER_H__
```

## 5.9 Feature.cpp File Reference

```
#include "Feature.h"
```

Include dependency graph for Feature.cpp:

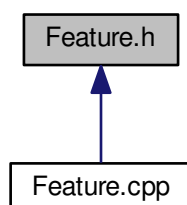


## 5.10 Feature.cpp

```
00001 #include "Feature.h"
```

## 5.11 Feature.h File Reference

This graph shows which files directly or indirectly include this file:



## Classes

- class [Feature](#)

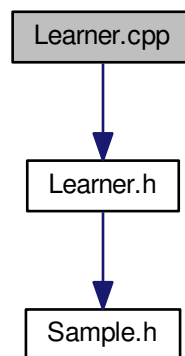
## 5.12 Feature.h

```
00001
00011 #ifndef __ARDUINO_NAIVE_BAYES_FEATURE_H__
00012 #define __ARDUINO_NAIVE_BAYES_FEATURE_H__ 1
00013
00014 class Feature {
00015
00016 public:
00017
00018 };
00019
00020 #endif // __ARDUINO_NAIVE_BAYES_FEATURE_H__
```

## 5.13 Learner.cpp File Reference

```
#include "Learner.h"
```

Include dependency graph for Learner.cpp:



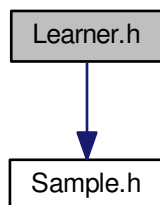
## 5.14 Learner.cpp

```
00001 #include "Learner.h"
```

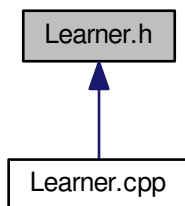
### 5.15 Learner.h File Reference

```
#include <Sample.h>
```

Include dependency graph for Learner.h:



This graph shows which files directly or indirectly include this file:



### Classes

- class [Learner](#)

### 5.16 Learner.h

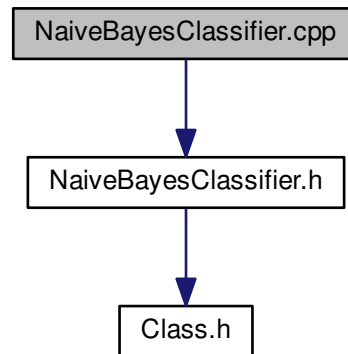
```

00001
00011 #ifndef __ARDUINO_NAIVE_BAYES_LEARNER_H__
00012 #define __ARDUINO_NAIVE_BAYES_LEARNER_H__ 1
00013
00014 #include <Sample.h>
00015
00016 class Learner {
00017
00018 public:
00019
00020     virtual void learn(Sample *sample) = 0;
00021 };
00022
00023 #endif // __ARDUINO_NAIVE_BAYES_LEARNER_H__
  
```

## 5.17 NaiveBayesClassifier.cpp File Reference

```
#include "NaiveBayesClassifier.h"
```

Include dependency graph for NaiveBayesClassifier.cpp:



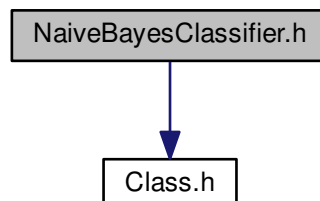
## 5.18 NaiveBayesClassifier.cpp

```
00001 #include "NaiveBayesClassifier.h"
00002
00003 NaiveBayesClassifier::NaiveBayesClassifier() {
00004 }
00005
00006 void NaiveBayesClassifier::learn(Sample *sample) {
00007 }
00008
00009 Class NaiveBayesClassifier::classify(Sample *sample) {
00010 }
```

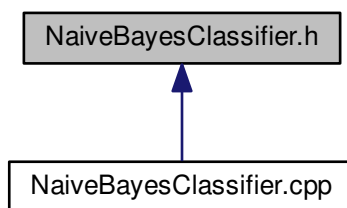
## 5.19 NaiveBayesClassifier.h File Reference

```
#include <Class.h>
```

Include dependency graph for NaiveBayesClassifier.h:



This graph shows which files directly or indirectly include this file:



## Classes

- class `NaiveBayesClassifier`

## 5.20 NaiveBayesClassifier.h

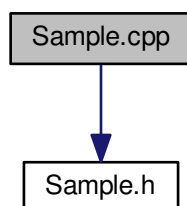
```

00001
00011 #ifndef __ARDUINO_NAIVE_BAYES_CLASSIFIER_H__
00012 #define __ARDUINO_NAIVE_BAYES_CLASSIFIER_H__ 1
00013
00014 #include <Class.h>
00015
00016 class NaiveBayesClassifier : public Classifier, public
    Learner {
00017
00018 public:
00019     NaiveBayesClassifier();
00020
00021     virtual void learn(Sample *sample);
00022
00023     virtual Class classify(Sample *sample);
00024 };
00025
00026 #endif // __ARDUINO_NAIVE_BAYES_CLASSIFIER_H__
  
```

## 5.21 Sample.cpp File Reference

```
#include "Sample.h"
```

Include dependency graph for `Sample.cpp`:



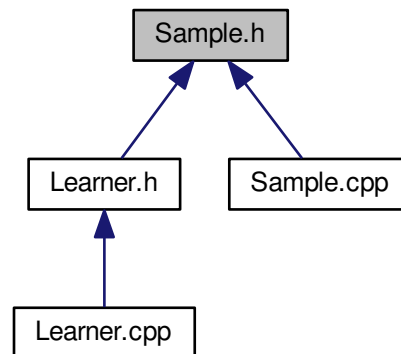


## 5.22 Sample.cpp

```
00001 #include "Sample.h"
```

## 5.23 Sample.h File Reference

This graph shows which files directly or indirectly include this file:



### Classes

- class [Sample](#)

## 5.24 Sample.h

```
00001
00011 #ifndef __ARDUINO_NAIVE_BAYES_SAMPLE_H__
00012 #define __ARDUINO_NAIVE_BAYES_SAMPLE_H__ 1
00013
00014 class Sample {
00015
00016 public:
00017
00018 };
00019
00020 #endif // __ARDUINO_NAIVE_BAYES_SAMPLE_H__
```



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