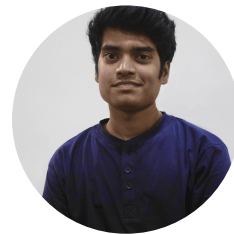


# **Intro to Machine Learning in PHP**



# Hello!

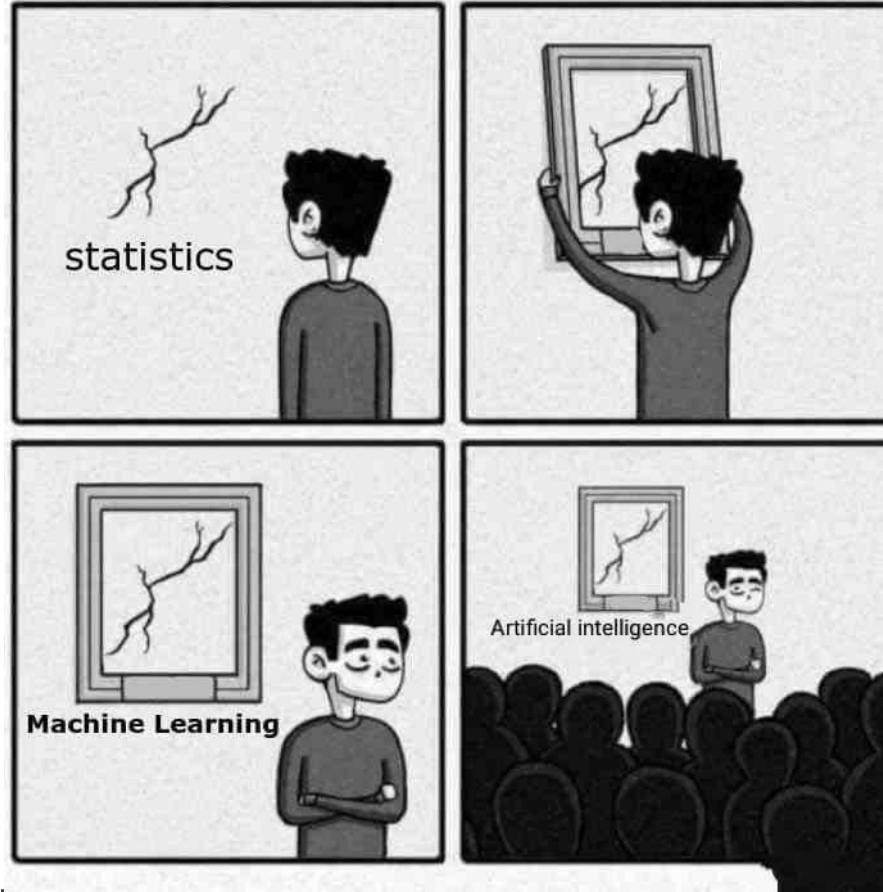
I am Jay Rodge

Machine Learning Fellow, **fellowship.ai**

Graduate Student, **Illinois Tech**

LinkedIn: /in/**jayrodge**

# **What is Machine Learning?**

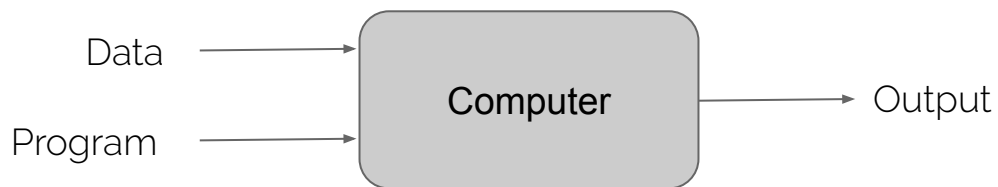


# Machine Learning

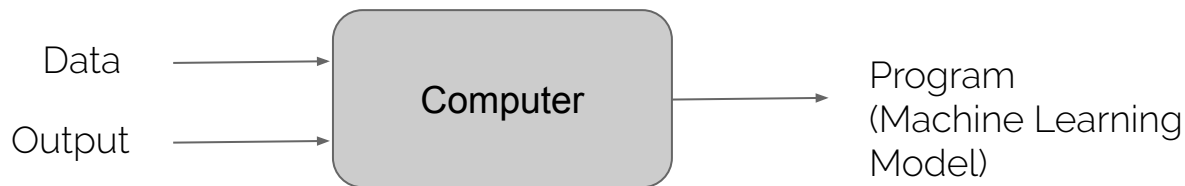
Getting computers to program themselves

- Writing software is the bottleneck!
- Let the data do the work instead!
- Open Source

## Traditional Programming

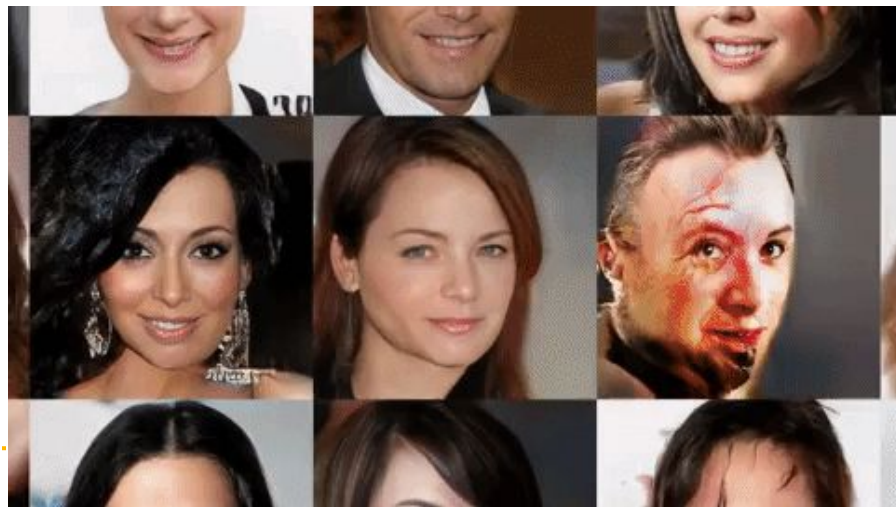
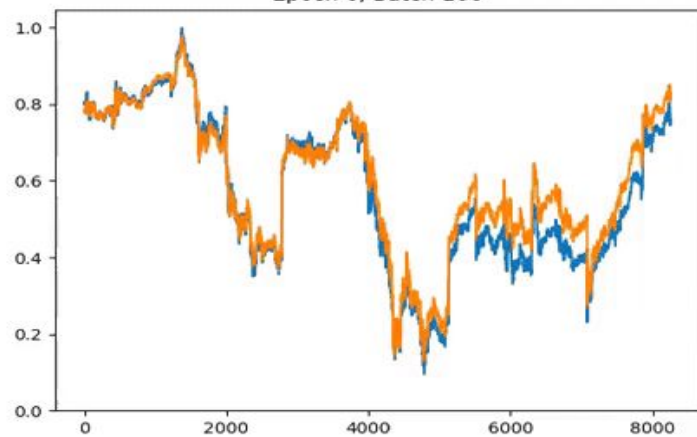


## Machine Learning



# Applications

Epoch 6, Batch 100





# Problem

IRIS dataset



Iris Versicolor

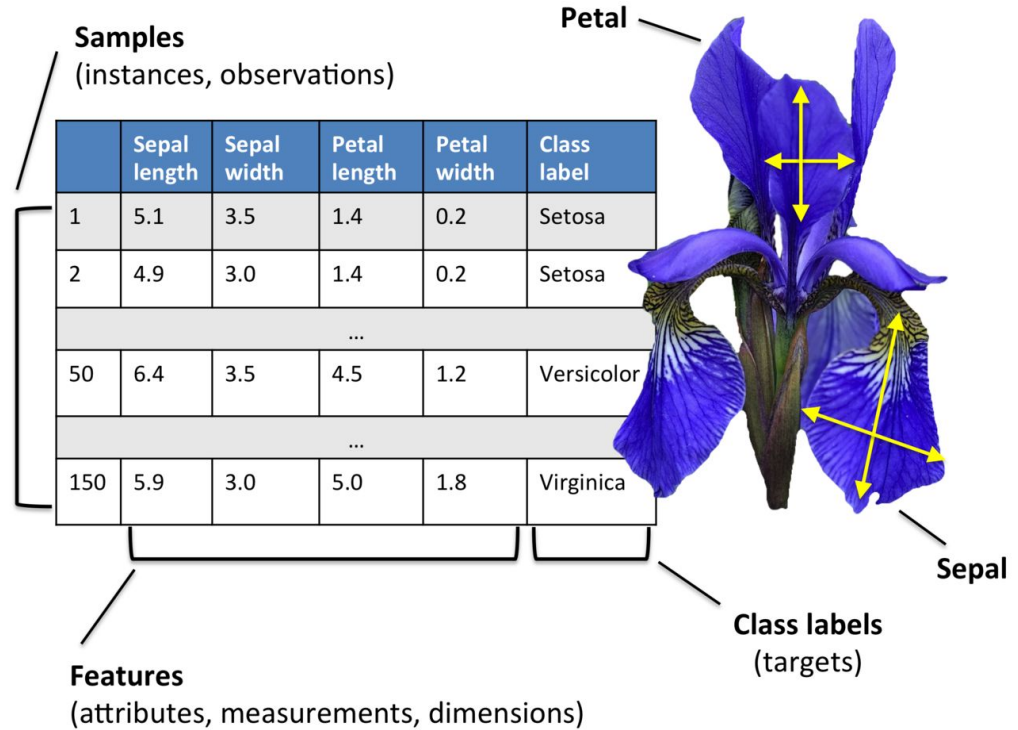


Iris Setosa



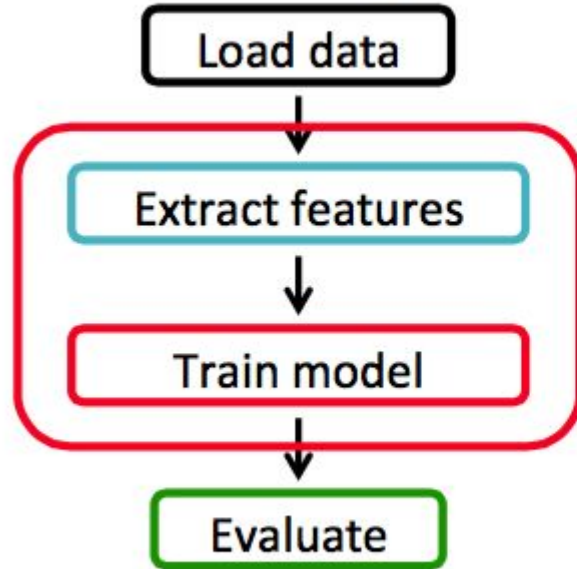
Iris Virginica

# Dataset



80%

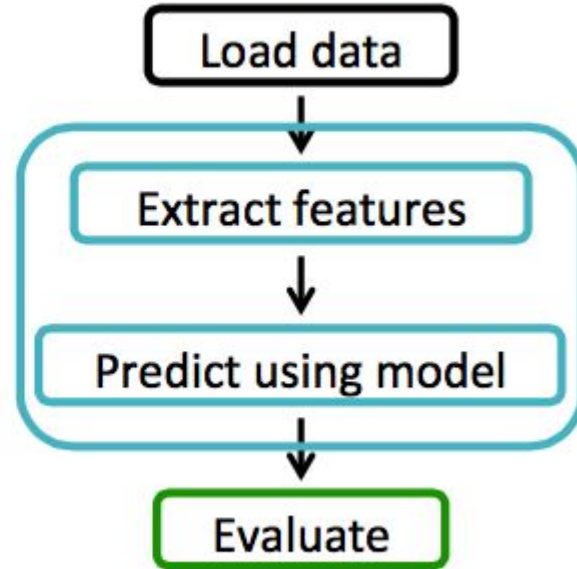
## Training



120/150

20%

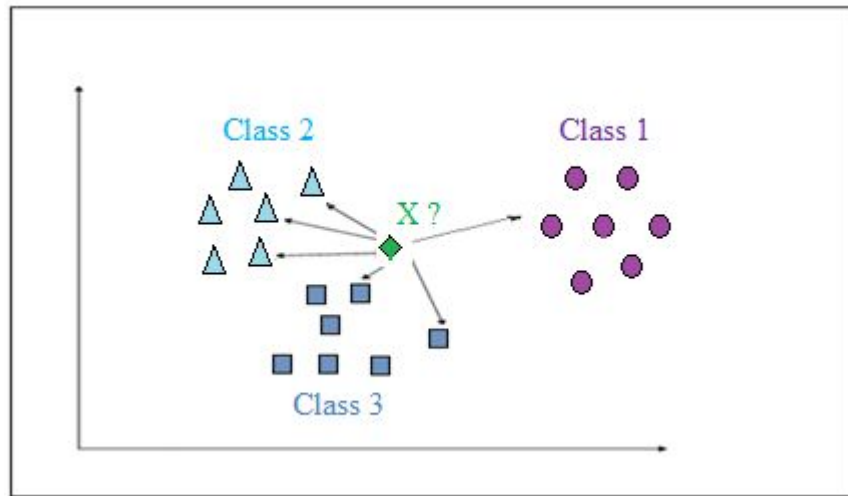
## Testing



30/150

# Model

- K Nearest Neighbour(KNN)
- Used for Classification





# Rubix ML

- A high-level machine learning library for the PHP language
- Developed by Andrew DalPino
- 40+ modern supervised and unsupervised learning algorithms
- Open Source

## **Data**

Iris Dataset

## **Alogrithm**

KNN

## **Framework**

Rubix ML

**TALK IS CHEAP**

**SHOW ME THE CODE**

memegenerator.net

# Code

<https://github.com/RubixML/Iris>



**What next?**

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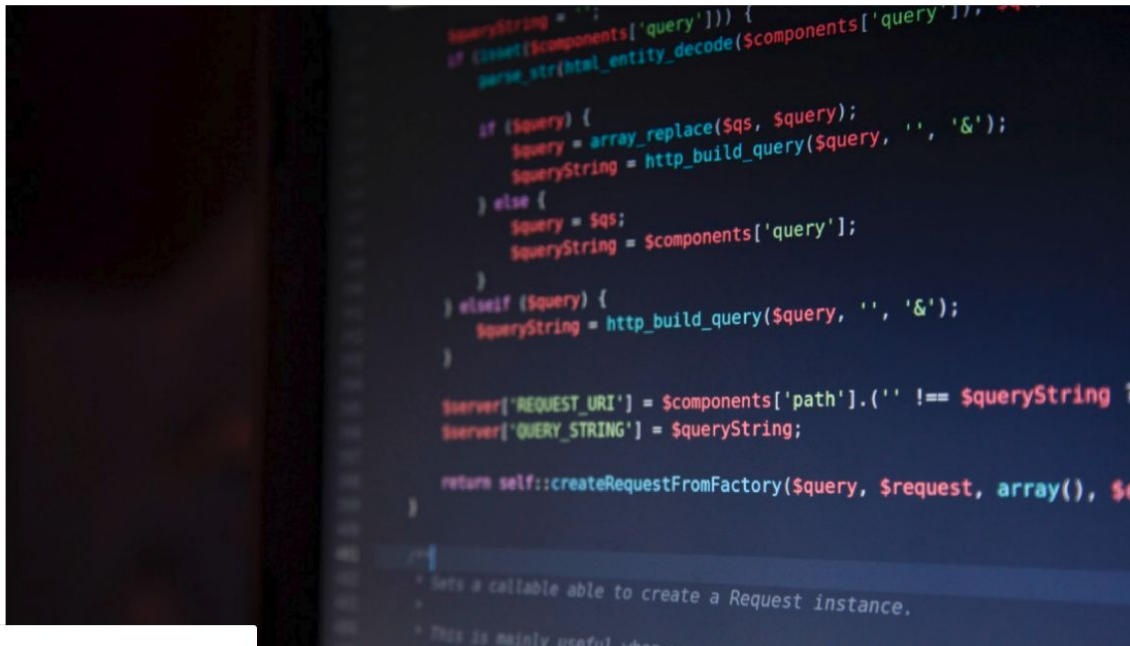
# Beginner Guide to Data Science

Curated list of Resources for Getting Started in Data Science and Deep Learning in 2019



Jay Rodge

Jan 5 · 5 min read





# Rubix ML

A high-level machine learning and deep learning library for the *php* language.

- **Developer-friendly** API is easy and delightful to use
- **Modular** architecture combines power, flexibility, and extensibility
- **40+** modern supervised and unsupervised learning algorithms
- **Open source** and free to use commercially



View Project



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PHP-ML - Machine Learning library for PHP

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Regression

LeastSquares

SVR

Clustering

KMeans

DBSCAN

Metric

Accuracy

Confusion Matrix

Classification Report

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# PHP-ML - Machine Learning library for PHP

php **>= 7.1** packagist **v0.8.0** build **passing** docs **passing** downloads **159.36 k** license **MIT**  
coverage **92%** Scrutinizer **9.50**



# PHP-ML

Fresh approach to Machine Learning in PHP. Algorithms, Cross Validation, Neural Network, Preprocessing, Feature Extraction and much more in one library.

PHP-ML requires PHP >= 7.1.

Simple example of classification:

```
require_once __DIR__ . '/vendor/autoload.php';
use Phpml\Classification\KNearestNeighbors;

$samples = [[1, 3], [1, 4], [2, 4], [3, 1], [4, 1], [4, 2]];
$labels = ['a', 'a', 'a', 'b', 'b', 'b'];

$classifier = new KNearestNeighbors();
$classifier->train($samples, $labels);

$classifier->predict([3, 2]);
// return 'b'
```



**Questions?**



# Thanks!

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**email:** jayrodge@live.com