

Capstone Project - MovieLens

Recommendation System

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Abstract

This report is part of the final project capstone to obtain the 'Professional Certificate in Data Science' emitted by Harvard University (HarvardX), through edx platform. The main objective is to create a recommendation system using the MovieLens dataset, and it must be done training a machine learning algorithm using the inputs in one subset to predict movie ratings in the validation set.

```
str(group.genres)
```

A New Output Format

`html_pretty` in the **prettydoc** package is a new output format for creating HTML document from R Markdown files. `html_pretty` is more lightweight compared to `html_document`, and is more stylish than `html_vignette` when creating package vignettes.

New Styles

`html_pretty` currently supports three page themes (`cayman`, `tactile` and `architect`), and two syntax highlight styles (`github` and `vignette`). The theme and highlight styles can be specified in the document metadata, for example:

```
output:
  prettydoc:html_pretty:
    theme: architect
    highlight: github
```

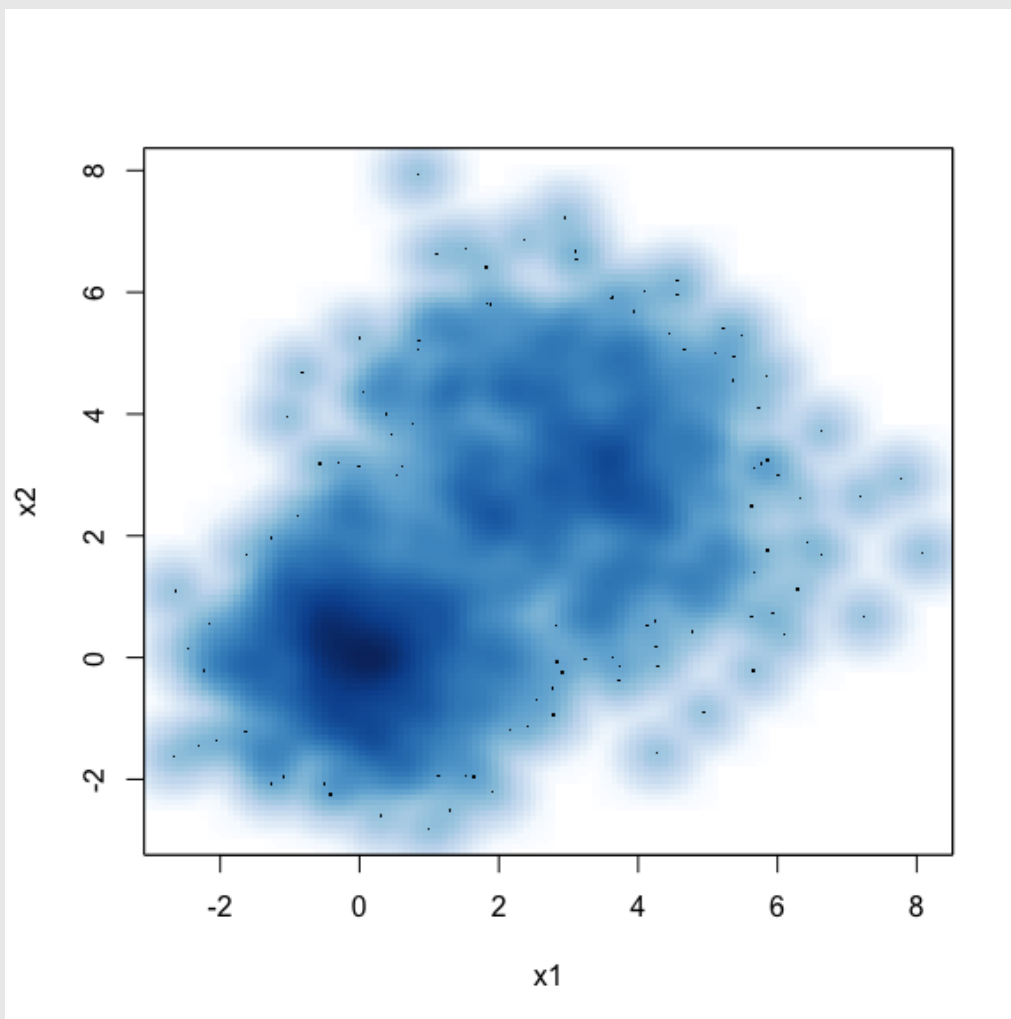
Your Familiar Tools

Feel free to use the `knitr` infrastructure with dozens of tunable options in your document.

```
set.seed(123)
n <- 1000
x1 <- matrix(rnorm(n), ncol = 2)
x2 <- matrix(rnorm(n, mean = 3, sd = 1.5), ncol = 2)
x <- rbind(x1, x2)
head(x)
```

```
##           [,1]      [,2]
## [1,] -0.56047565 -0.60189285
## [2,] -0.23017749 -0.99369859
## [3,]  1.55870831  1.02678506
## [4,]  0.07050839  0.75106130
## [5,]  0.12928774 -1.50916654
## [6,]  1.71506499 -0.09514745
```

```
smoothScatter(x, xlab = "x1", ylab = "x2")
```



You can include code snippets of languages other than R, but note that the block header has no curly brackets around the language name.

```
// [[Rcpp::export]]
NumericVector timesTwo(NumericVector x) {
  return x * 2;
}
```

You can also write math expressions, e.g. $Y = X\beta + \epsilon$, footnotes¹, and tables, e.g. using `knitr::kable()`.

Sepal.Length	Sepal.Width	Petal.Length	Petal.Width	Species
5.1	3.5	1.4	0.2	setosa
4.9	3.0	1.4	0.2	setosa
4.7	3.2	1.3	0.2	setosa
4.6	3.1	1.5	0.2	setosa
5.0	3.6	1.4	0.2	setosa
5.4	3.9	1.7	0.4	setosa
4.6	3.4	1.4	0.3	setosa
5.0	3.4	1.5	0.2	setosa
4.4	2.9	1.4	0.2	setosa
4.9	3.1	1.5	0.1	setosa

Stay Tuned

Please visit the [development page](#) of the `prettydoc` package for latest updates and news. Comments, bug reports and pull requests are always welcome.

1. A footnote here.↩