

# Top Song Predictor

## R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
library(dplyr)

##
## Attaching package: 'dplyr'
##
## The following objects are masked from 'package:stats':
##
##   filter, lag
##
## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union

library(ggplot2)
library(pROC)

## Warning: package 'pROC' was built under R version 3.6.2
## Type 'citation("pROC")' for a citation.
##
## Attaching package: 'pROC'
##
## The following objects are masked from 'package:stats':
##
##   cov, smooth, var
```

## Helper Functions

## Data Analysis

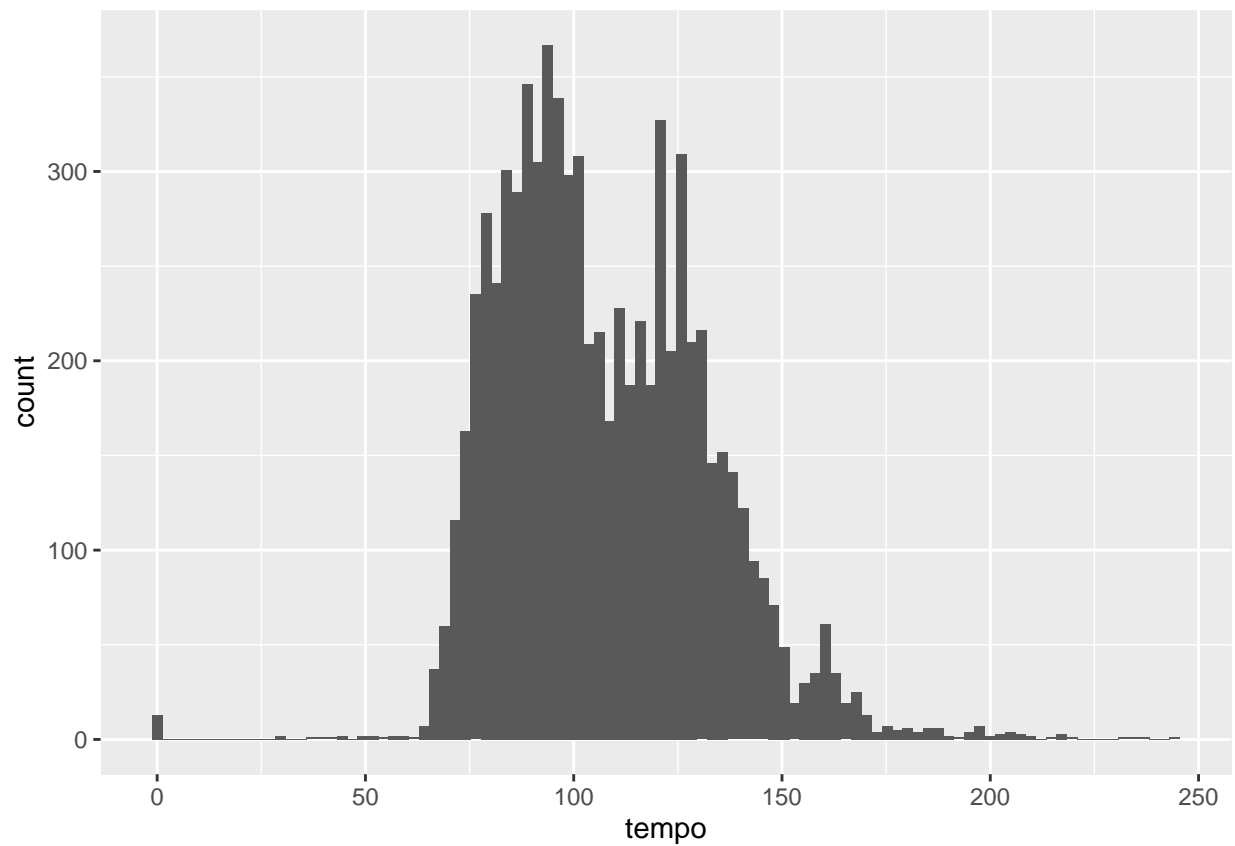
```
data <- read.csv('MusicData.csv')
data[is.na(data)]

## character(0)
There is no missing data
dim(data)

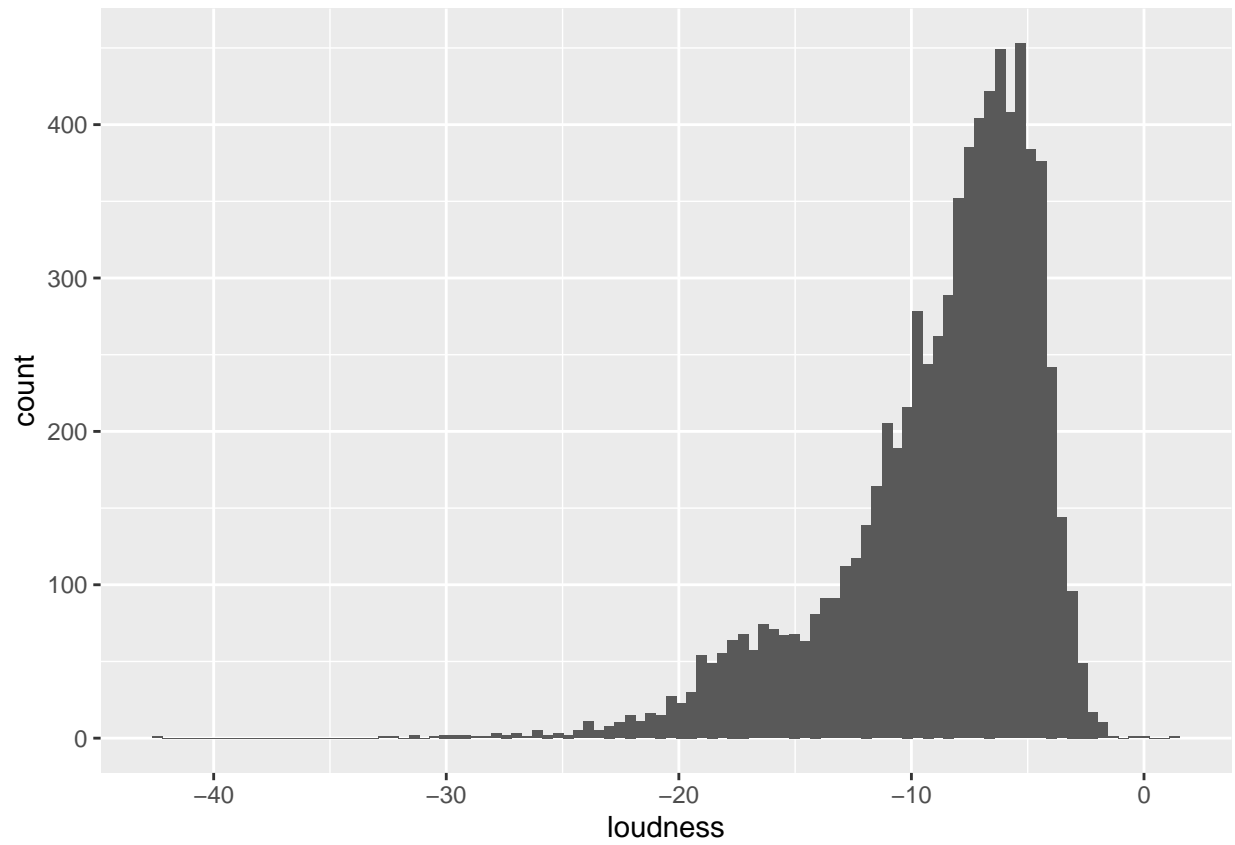
## [1] 7574 39
```

There's 7574 rows and 39 columns

```
p <- ggplot(data, aes(x=tempo)) + geom_histogram(bins = 100)
print(p)
```



```
p <- ggplot(data, aes(x=loudness)) + geom_histogram(bins = 100)
print(p)
```



```
p <- ggplot(data, aes(x=energy)) + geom_histogram(bins = 100)
print(p)
```

