# Plots

*Sophie_Berube*

*10/10/2017*

```
library(rplos)
library(ggplot2)
list("ANOVA", "bayes", "bayesian","linear regression","linear mixed models", "mixed models","generalized
```

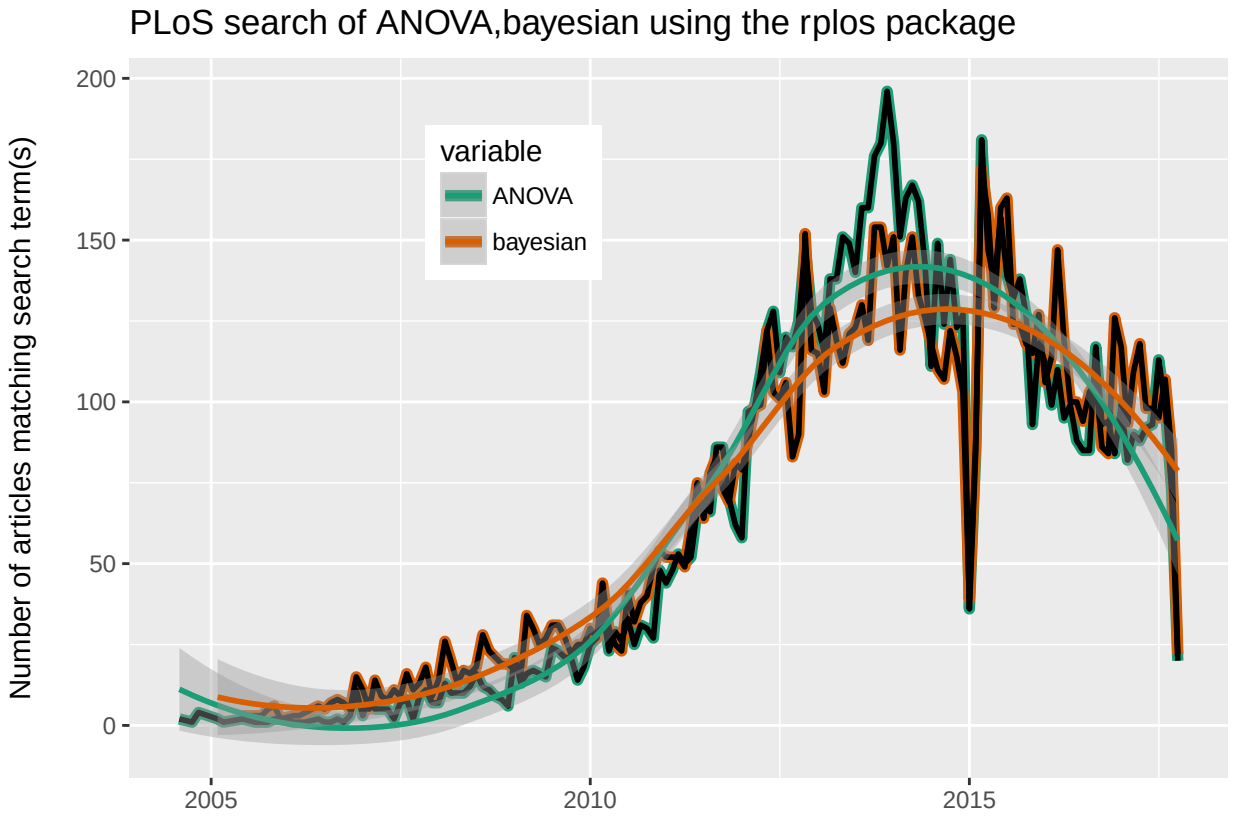
```
## [[1]]
## [1] "ANOVA"
##
## [[2]]
## [1] "bayes"
##
## [[3]]
## [1] "bayesian"
##
## [[4]]
## [1] "linear regression"
##
## [[5]]
## [1] "linear mixed models"
##
## [[6]]
## [1] "mixed models"
##
## [[7]]
## [1] "generalized estimating equations"
##
## [[8]]
## [1] "machine learning"
##
## [[9]]
## [1] "support vector machine"
##
## [[10]]
## [1] "bootstrap"
##
## [[11]]
## [1] "deep learning"
##
## [[12]]
## [1] "neural network"
```

```
#pairwise comparisons ANOVA

ANOVA_Bayesian<- plot_throughtime(terms=c("ANOVA","bayesian"),limit=10000) + geom_line(size=1,color="bla

ANOVA_Bayesian
```

```
## Warning: Removed 4 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 3 rows containing missing values (geom_path).
```

```
## Warning: Removed 3 rows containing missing values (geom_path).
```

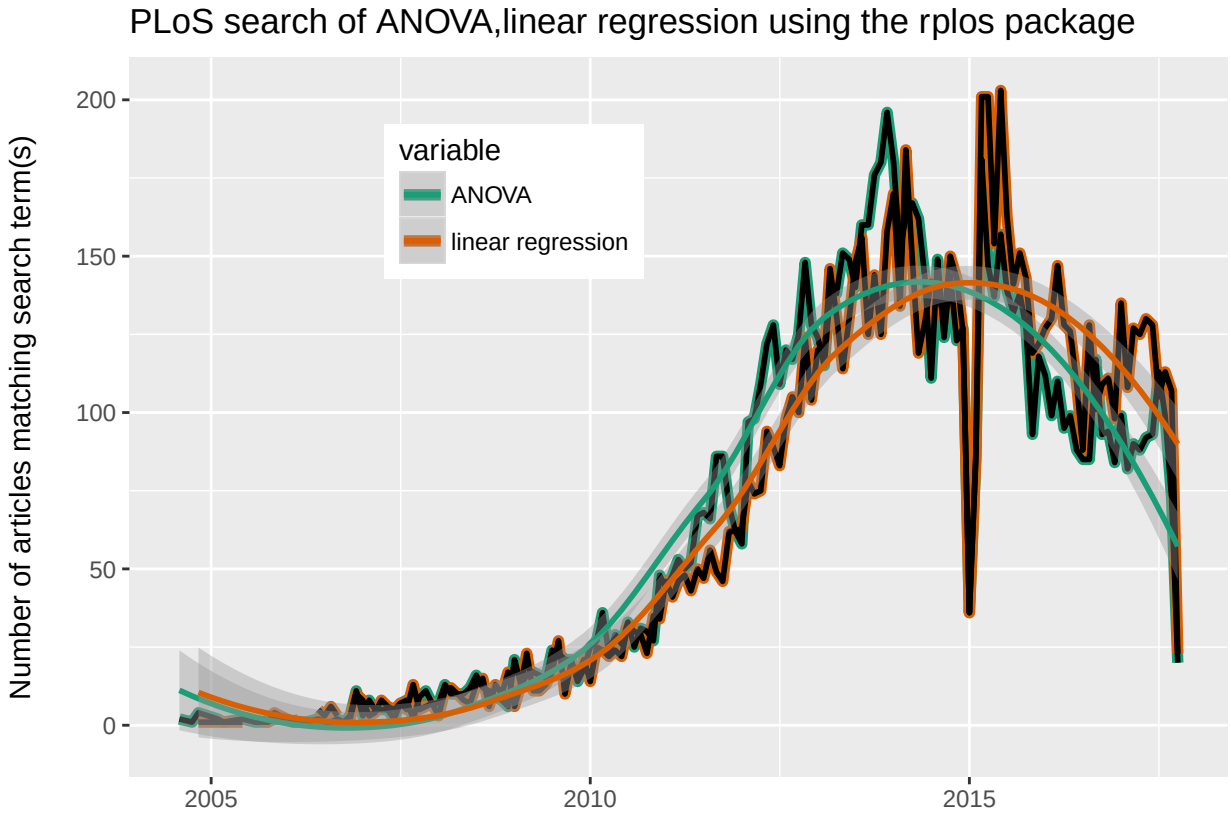



```
ANOVA_LR<- plot_throughtime(terms=c("ANOVA","linear regression"),limit=10000) + geom_line(size=1,color=

ANOVA_LR
```

```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).
```

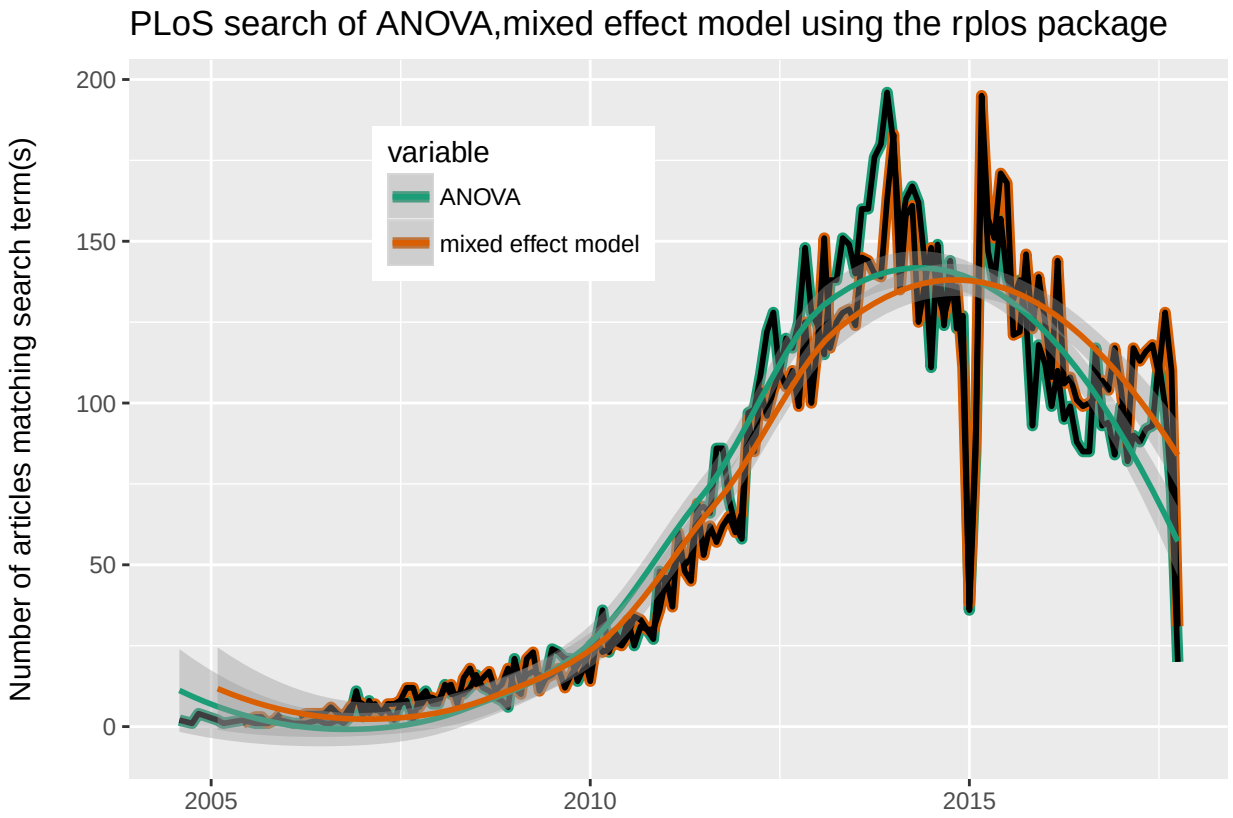
```
## Warning: Removed 2 rows containing missing values (geom_path).
```

```
## Warning: Removed 2 rows containing missing values (geom_path).
```

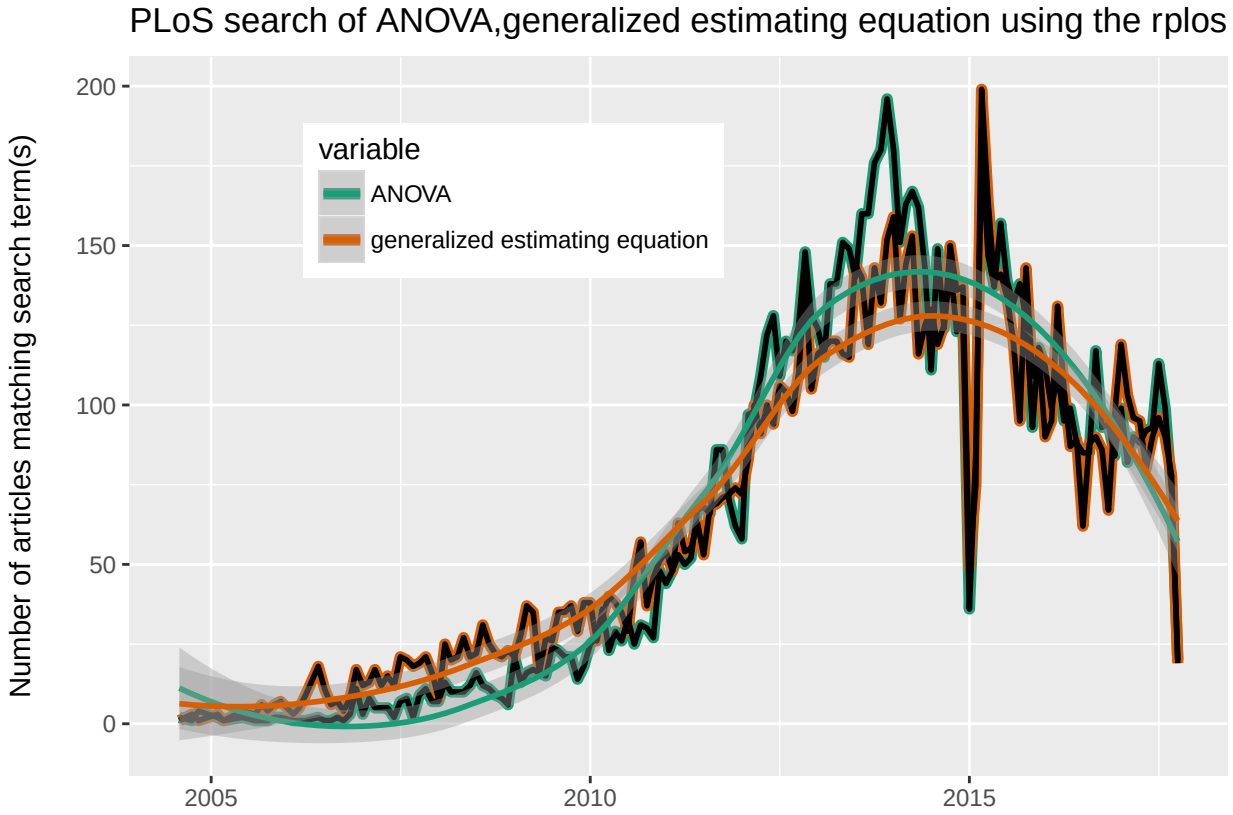



```
ANOVA_MM<- plot_throughtime(terms=c("ANOVA","mixed effect model"),limit=10000) + geom_line(size=1,color=

ANOVA_MM
```

```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).
## Warning: Removed 3 rows containing missing values (geom_path).
## Warning: Removed 3 rows containing missing values (geom_path).
```




```
ANOVA_GEE<- plot_throughtime(terms=c("ANOVA","generalized estimating equation"),limit=10000) + geom_lin
ANOVA_GEE
```



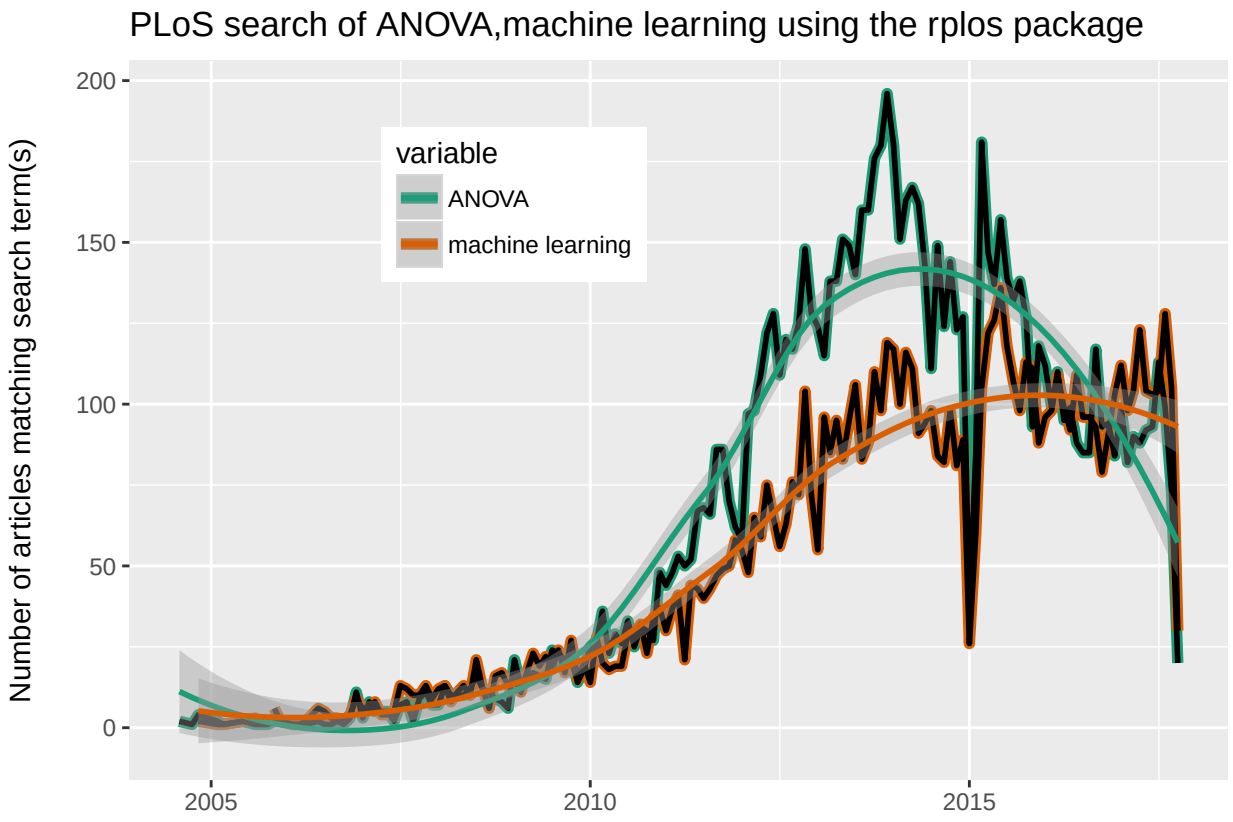
```
ANOVA_ML<-  plot_throughtime(terms=c("ANOVA","machine learning"),limit=10000) + geom_line(size=1,color=
```

```
ANOVA_ML
```

```
## Warning: Removed 3 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 2 rows containing missing values (geom_path).
```

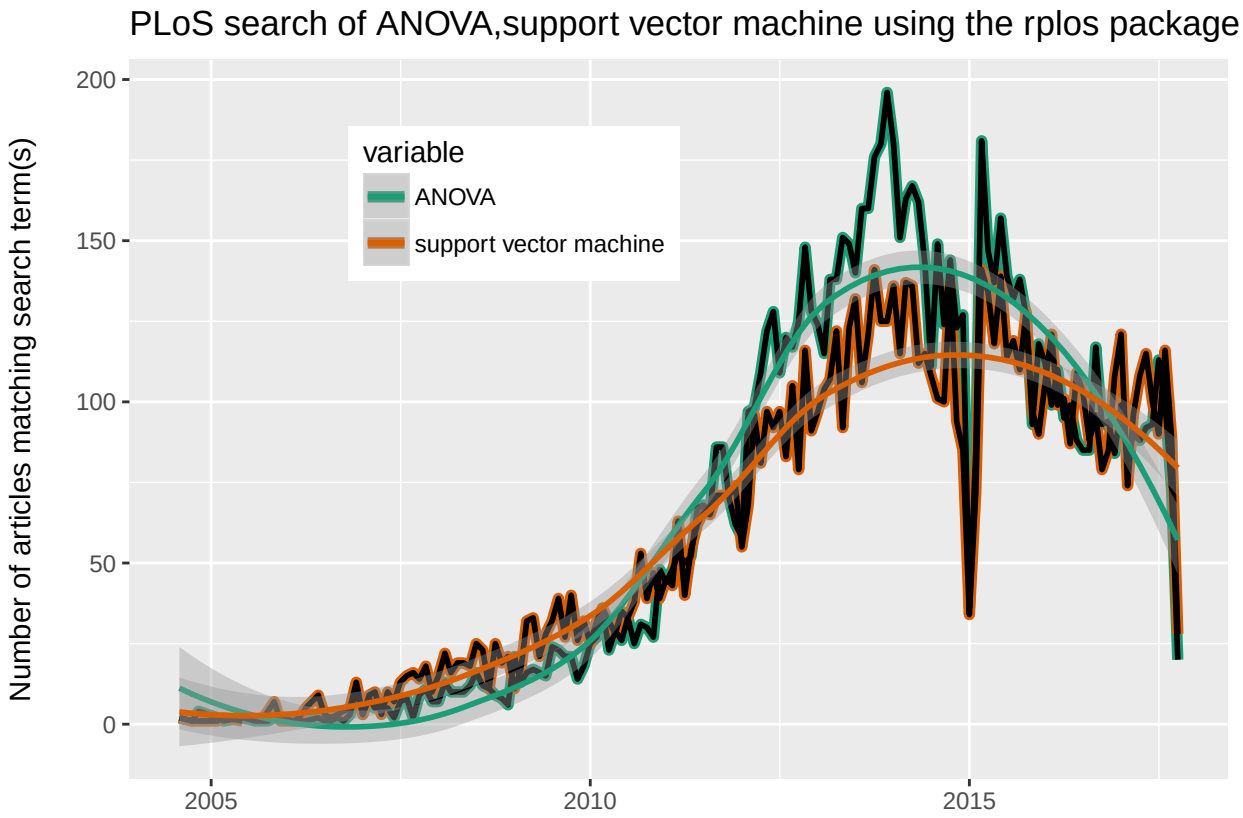
```
## Warning: Removed 2 rows containing missing values (geom_path).
```




```
ANOVA_SVM<-  plot_throughtime(terms=c("ANOVA","support vector machine"),limit=10000) + geom_line(size=1
```

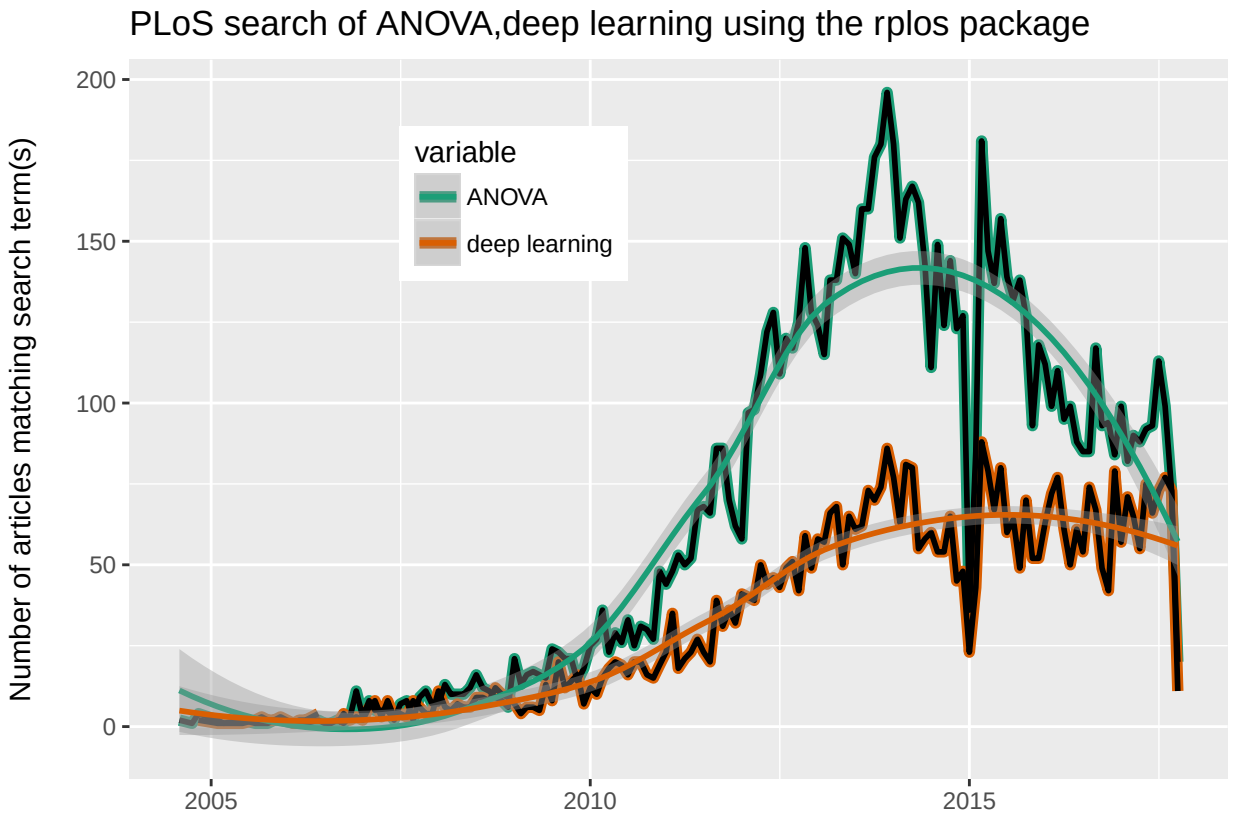
```
ANOVA_SVM
```

```
## Warning: Removed 1 rows containing non-finite values (stat_smooth).
```

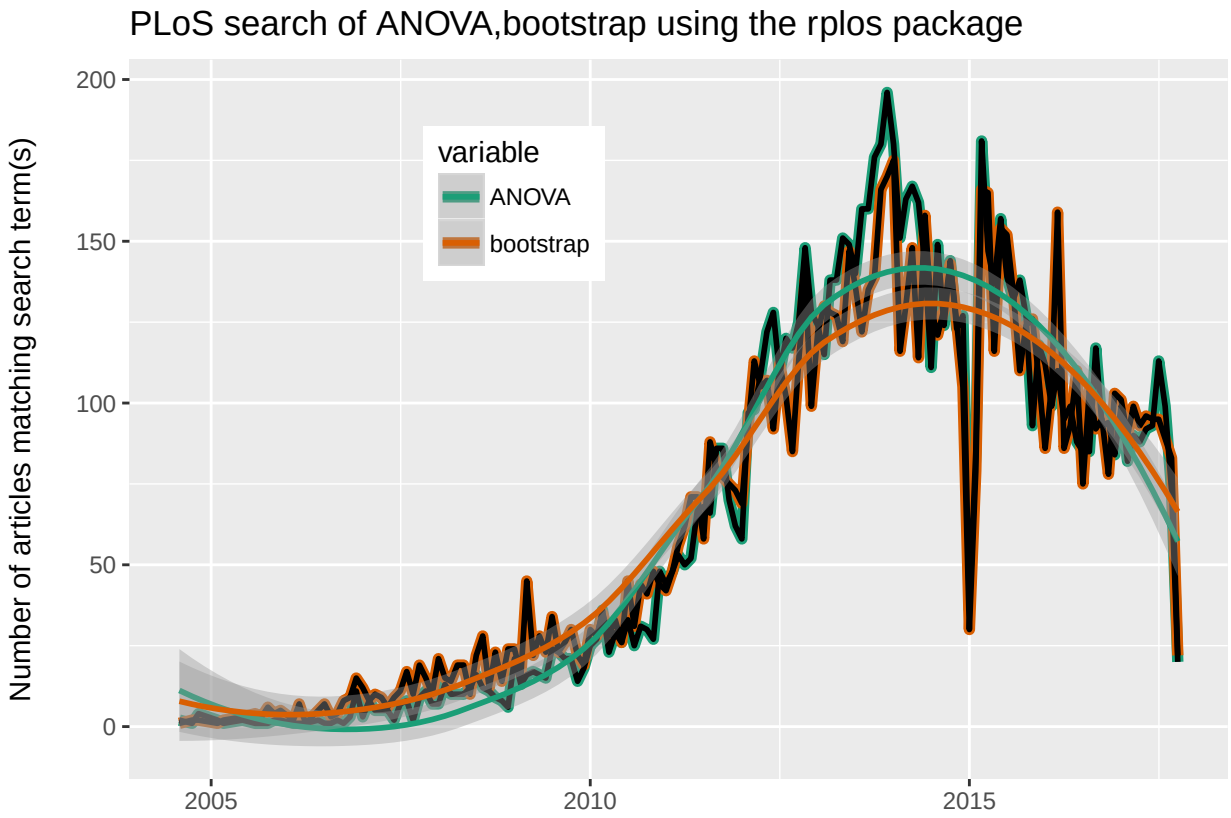



```
ANOVA_DL<-  plot_throughtime(terms=c("ANOVA","deep learning"),limit=10000) + geom_line(size=1,color="bla

ANOVA_DL
```

```
## Warning: Removed 3 rows containing non-finite values (stat_smooth).
```

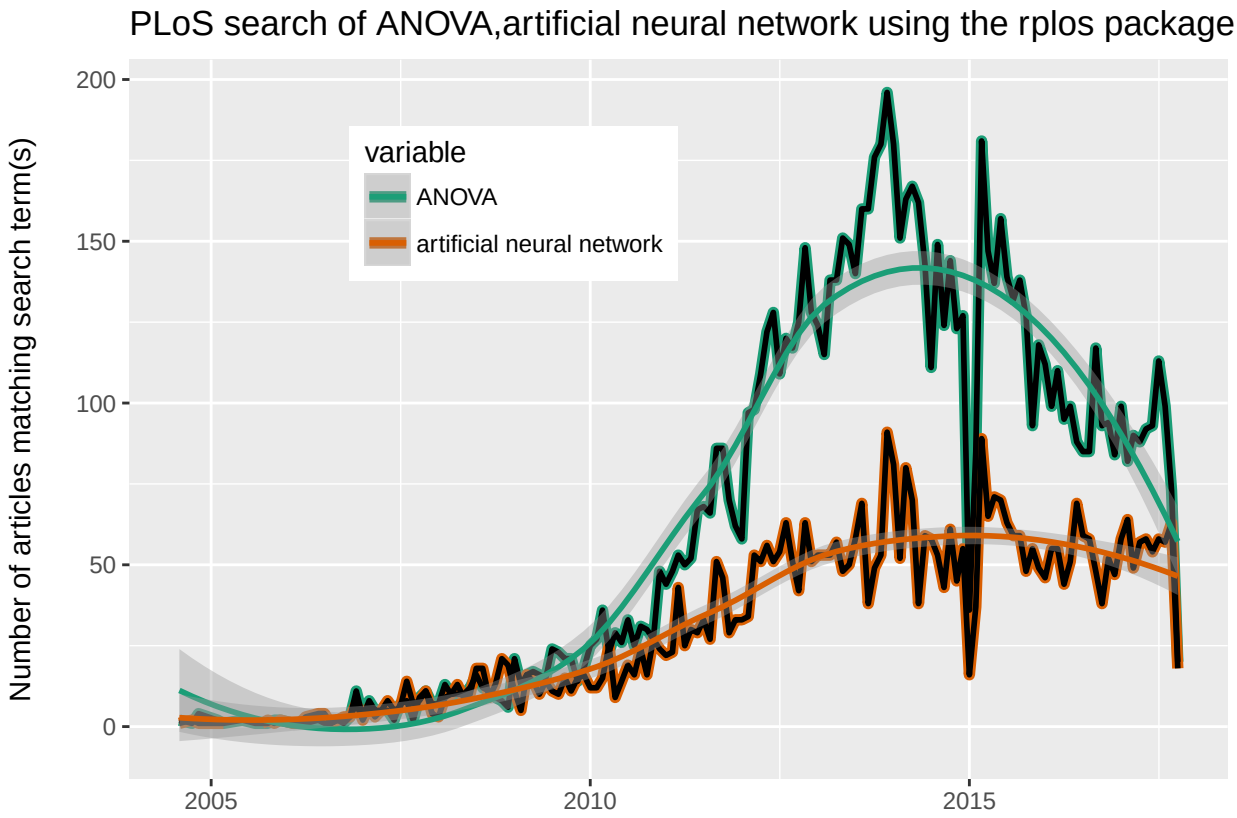



```
ANOVA_Btstp<-  plot_throughtime(terms=c("ANOVA","bootstrap"),limit=10000) + geom_line(size=1,color="bla

ANOVA_Btstp
```



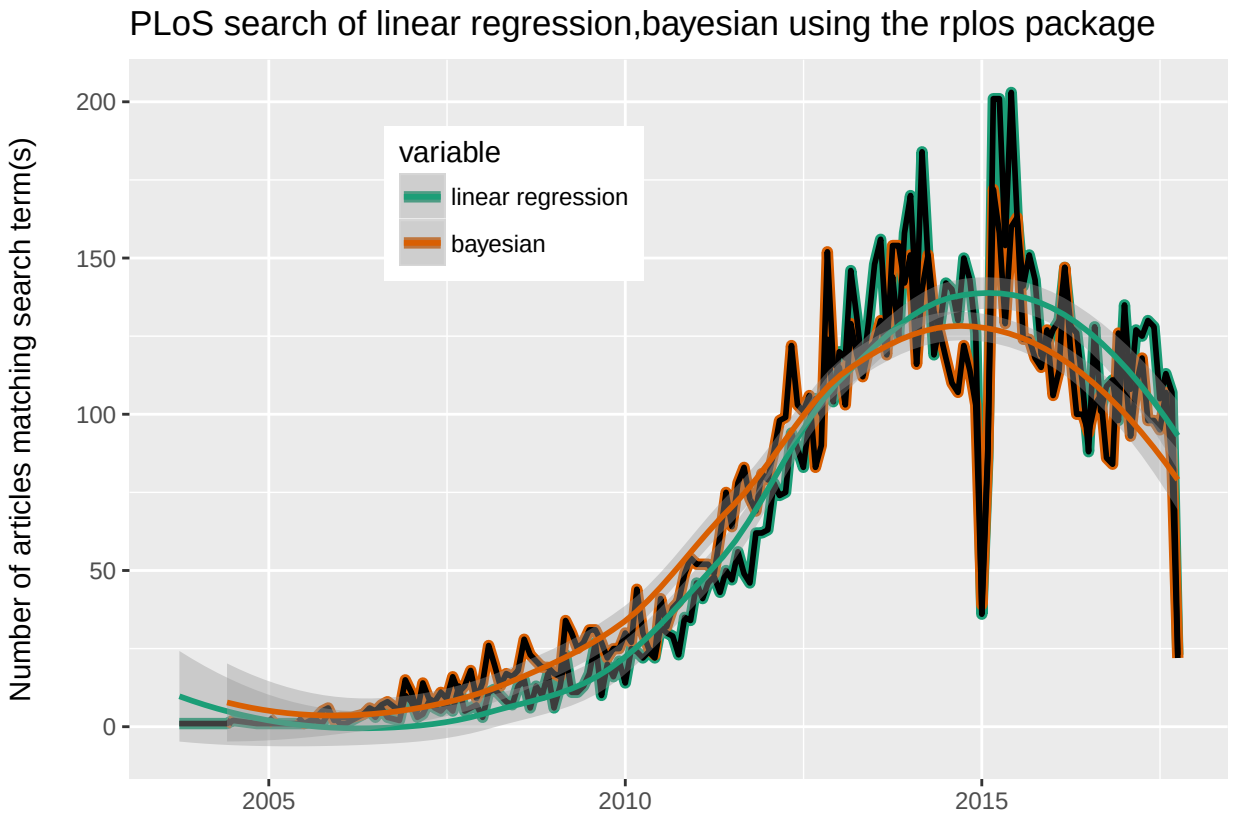

```
ANOVA_NN<-  plot_throughtime(terms=c("ANOVA","artificial neural network"),limit=10000) + geom_line(size=

ANOVA_NN
```

```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
```



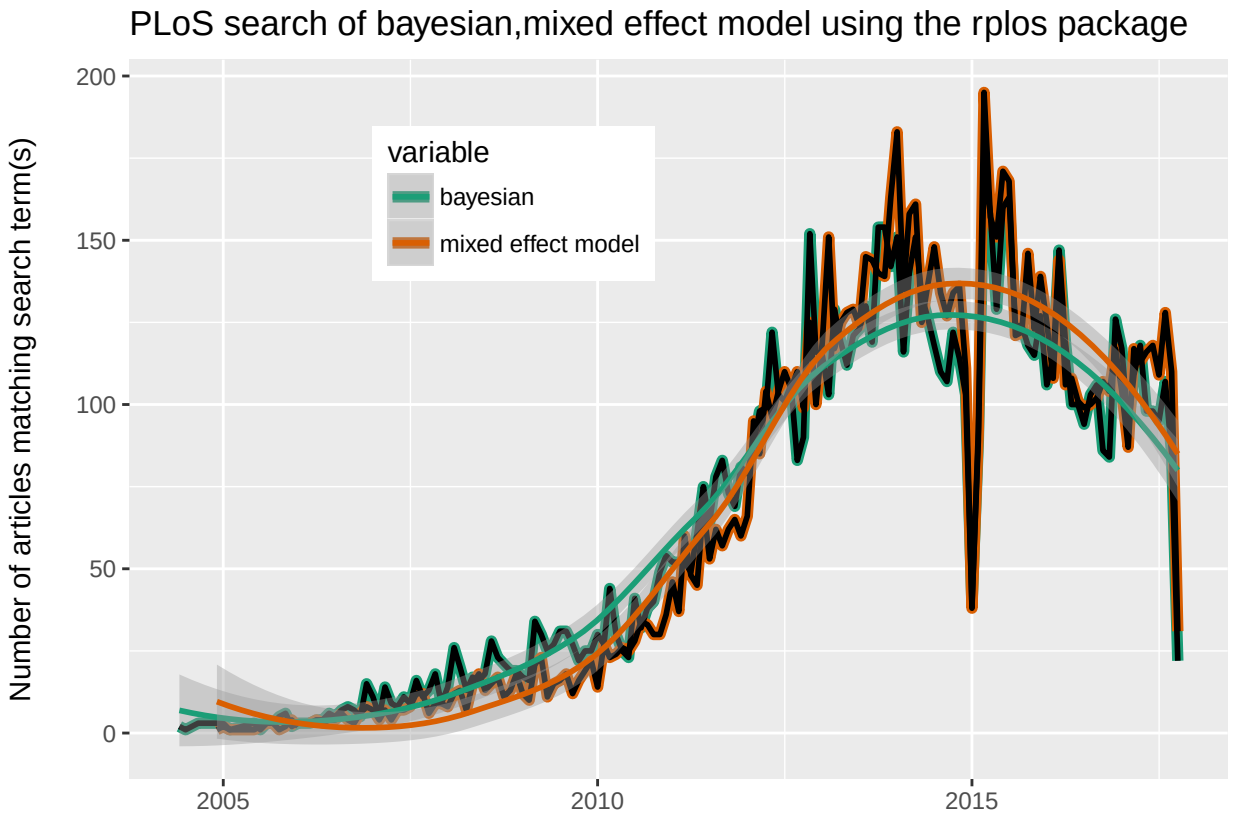

```
#pairwise comparisons bayesian

Bayesian_LR<- plot_throughtime(terms=c("linear regression","bayesian"),limit=10000) + geom_line(size=1,

Bayesian_LR
```

```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).
## Warning: Removed 3 rows containing missing values (geom_path).

## Warning: Removed 3 rows containing missing values (geom_path).
```



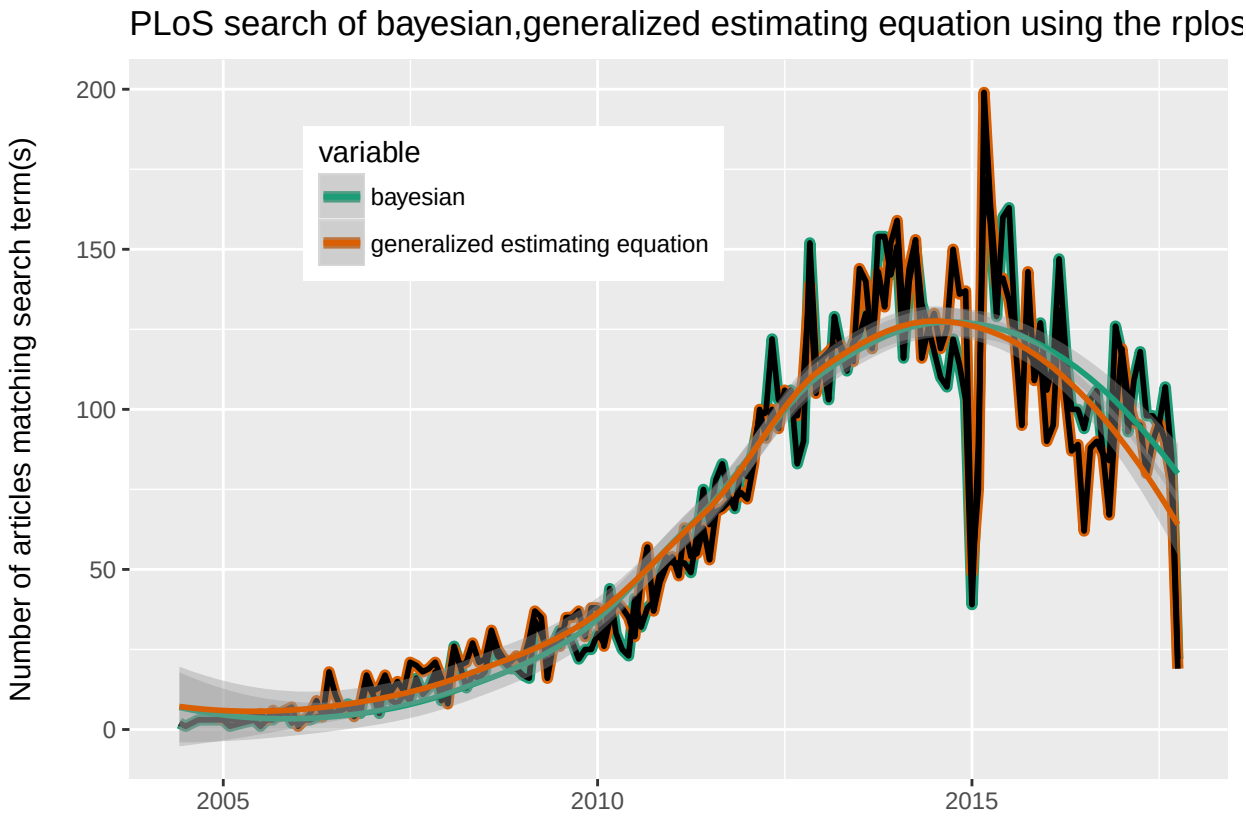

```
Bayesian_MM<- plot_throughtime(terms=c("bayesian","mixed effect model"),limit=10000) + geom_line(size=1

Bayesian_MM
```

```
## Warning: Removed 4 rows containing non-finite values (stat_smooth).

## Warning: Removed 3 rows containing missing values (geom_path).

## Warning: Removed 3 rows containing missing values (geom_path).
```



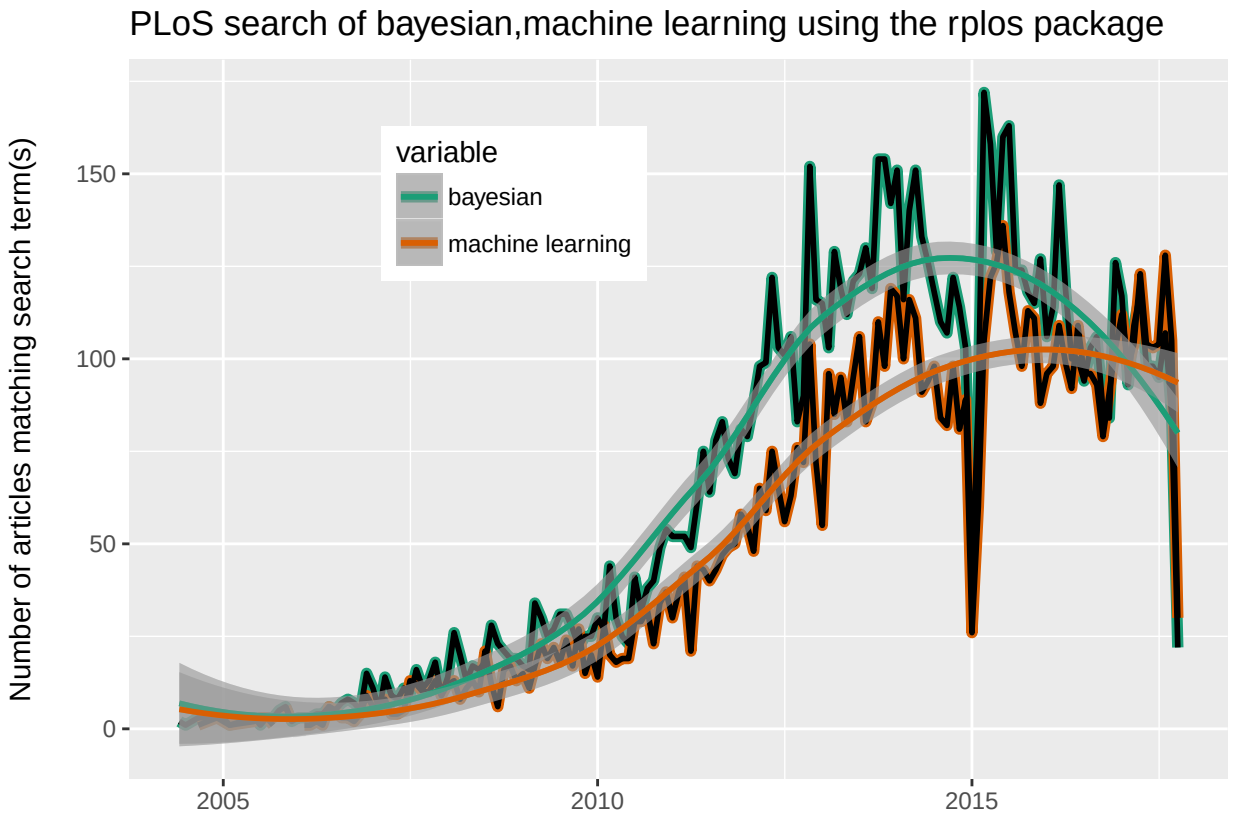

```
Bayesian_GEE<- plot_throughtime(terms=c("bayesian","generalized estimating equation"),limit=10000) + ge
Bayesian_GEE
```

```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
```



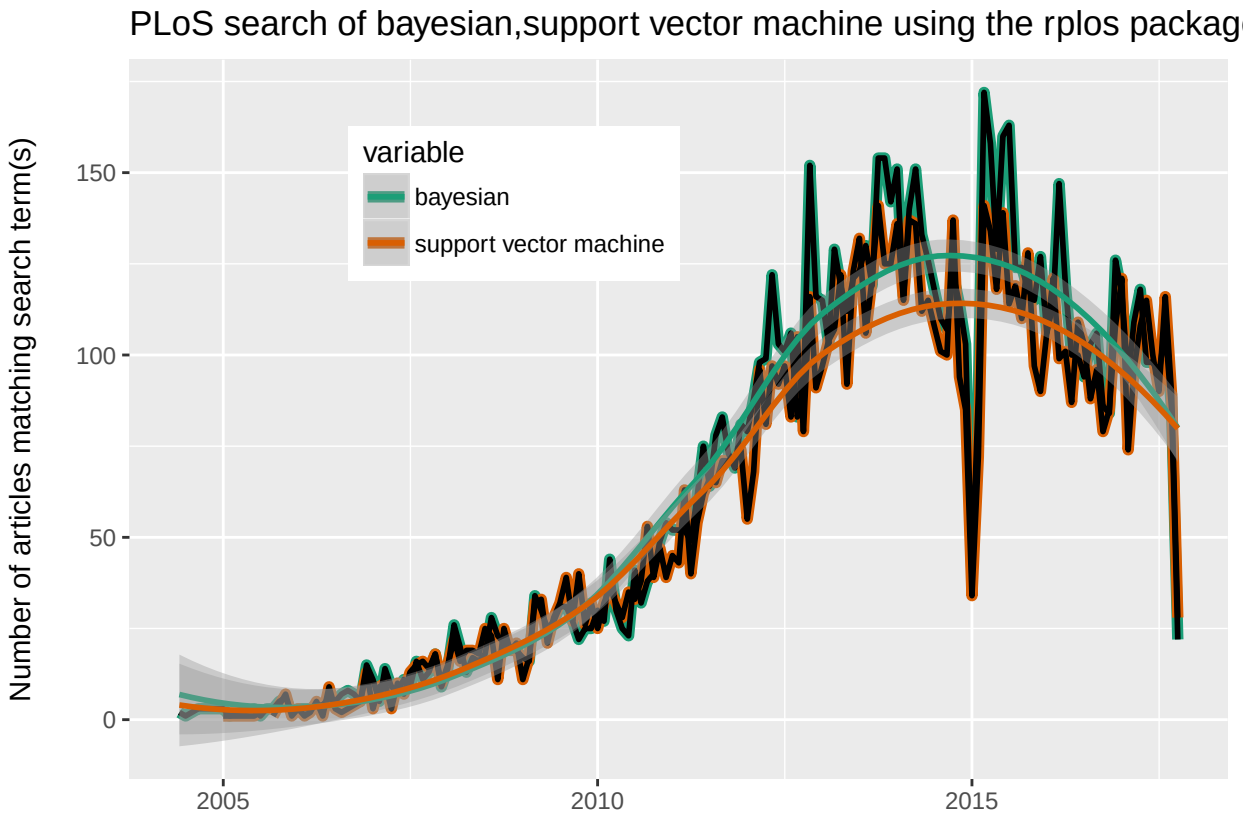

```
Bayesian_ML<-  plot_throughtime(terms=c("bayesian","machine learning"),limit=10000) + geom_line(size=1,

Bayesian_ML
```

```
## Warning: Removed 3 rows containing non-finite values (stat_smooth).
## Warning: Removed 3 rows containing non-finite values (stat_smooth).
```



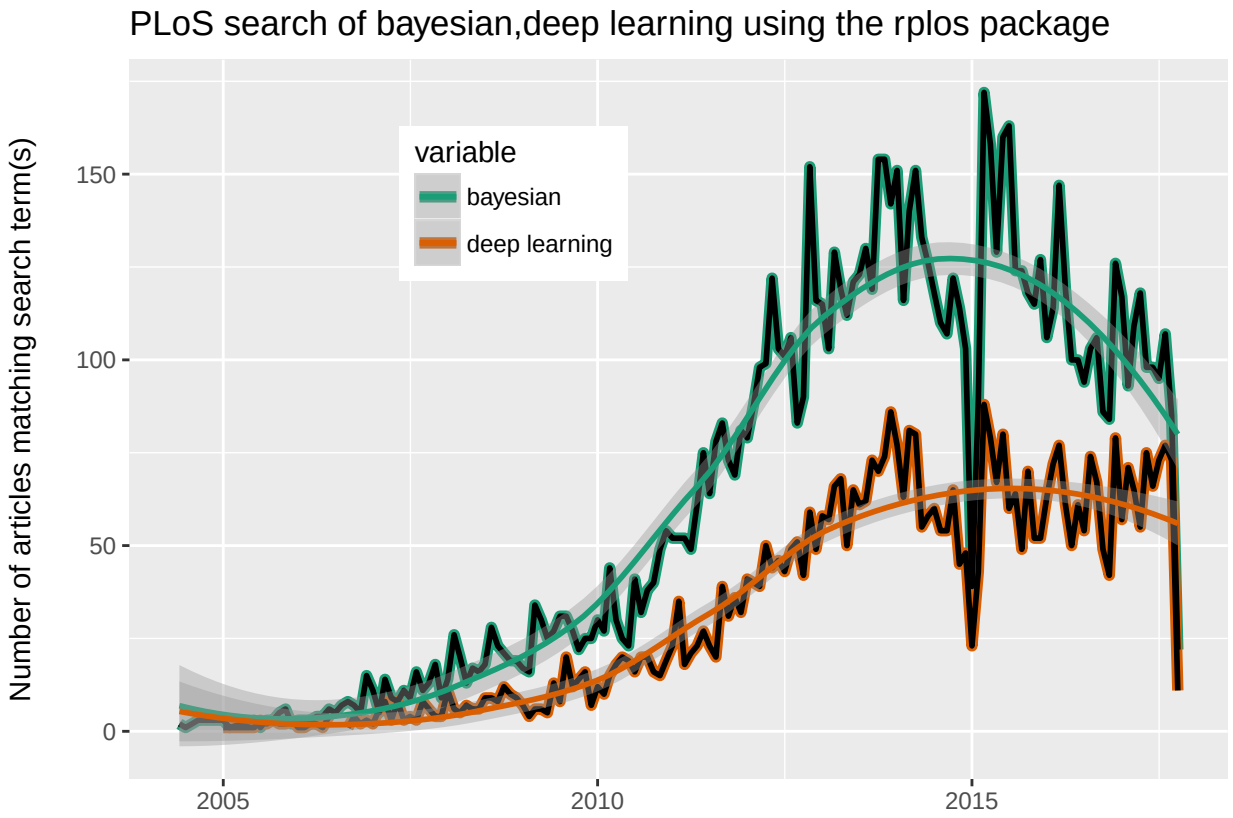

```
Bayesian_SVM<-  plot_throughtime(terms=c("bayesian","support vector machine"),limit=10000) + geom_line(s

Bayesian_SVM
```

```
## Warning: Removed 3 rows containing non-finite values (stat_smooth).
```



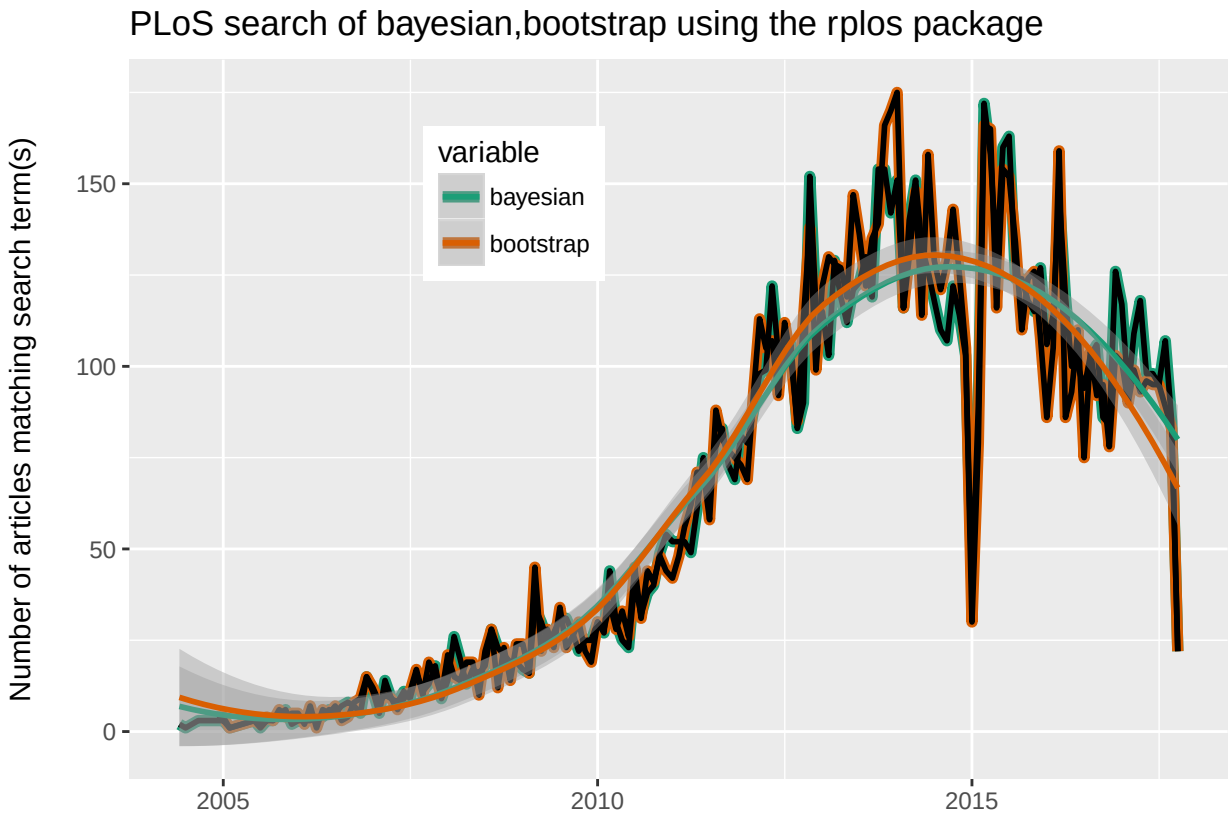

```
Bayesian_DL<-  plot_throughtime(terms=c("bayesian","deep learning"),limit=10000) + geom_line(size=1,col

Bayesian_DL
```

```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).
```



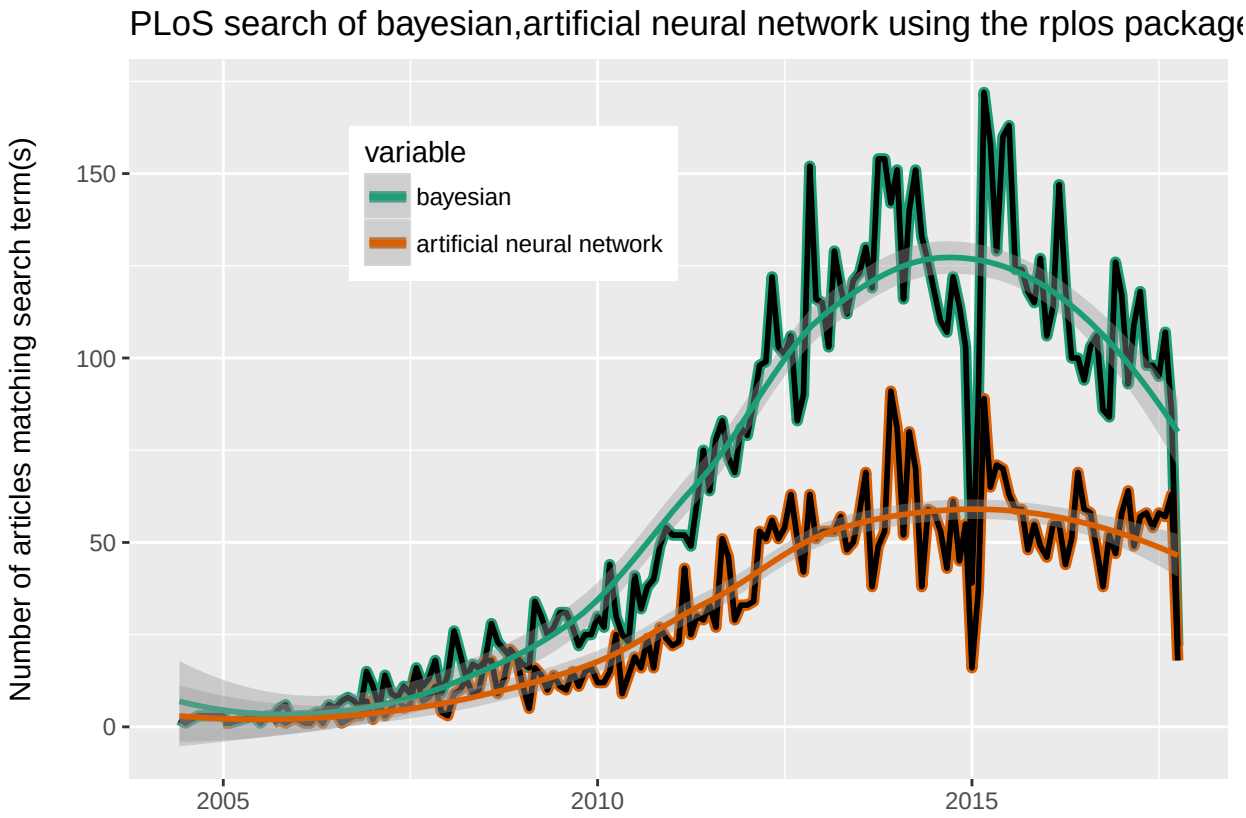

```
Bayesian_Btstp<-  plot_throughtime(terms=c("bayesian","bootstrap"),limit=10000) + geom_line(size=1,colo

Bayesian_Btstp
```

```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
```



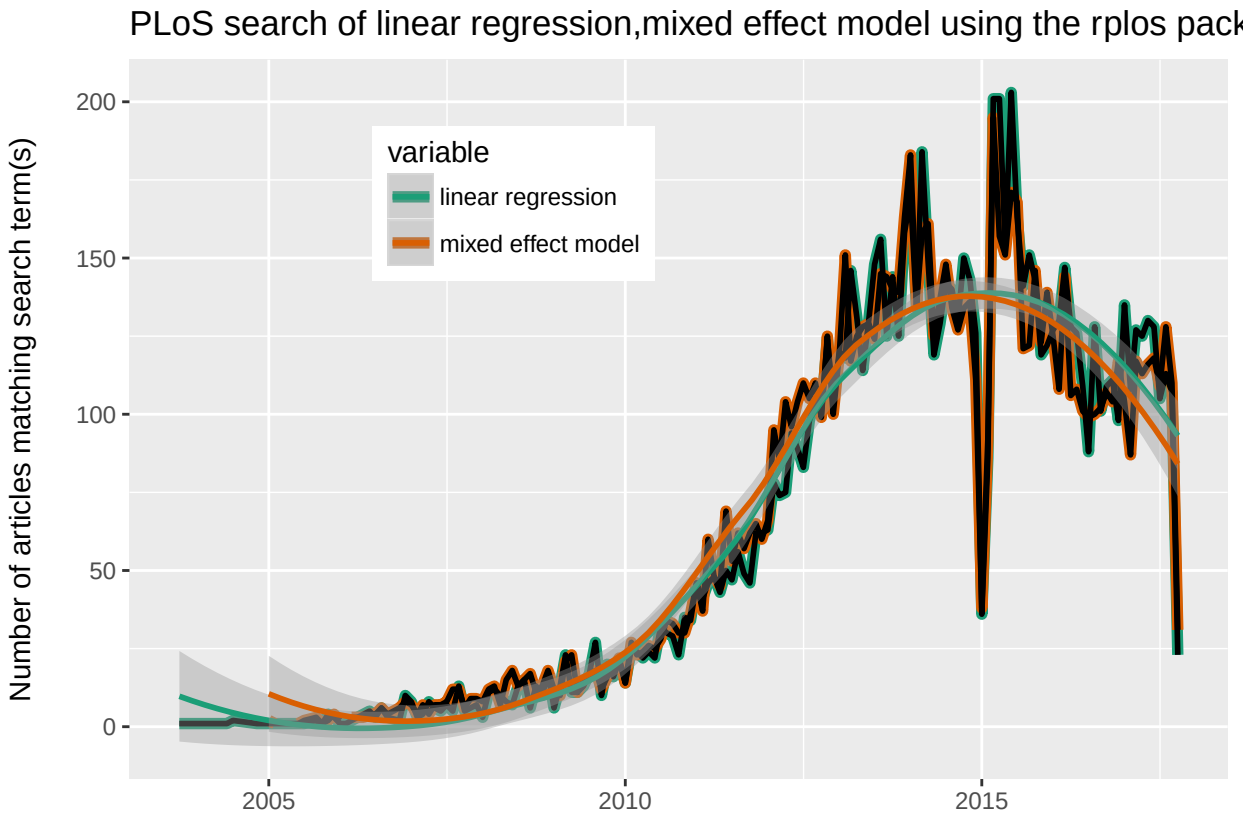

```
Bayesian_NN<-  plot_throughtime(terms=c("bayesian","artificial neural network"),limit=10000) + geom_lin

Bayesian_NN
```

```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).
```



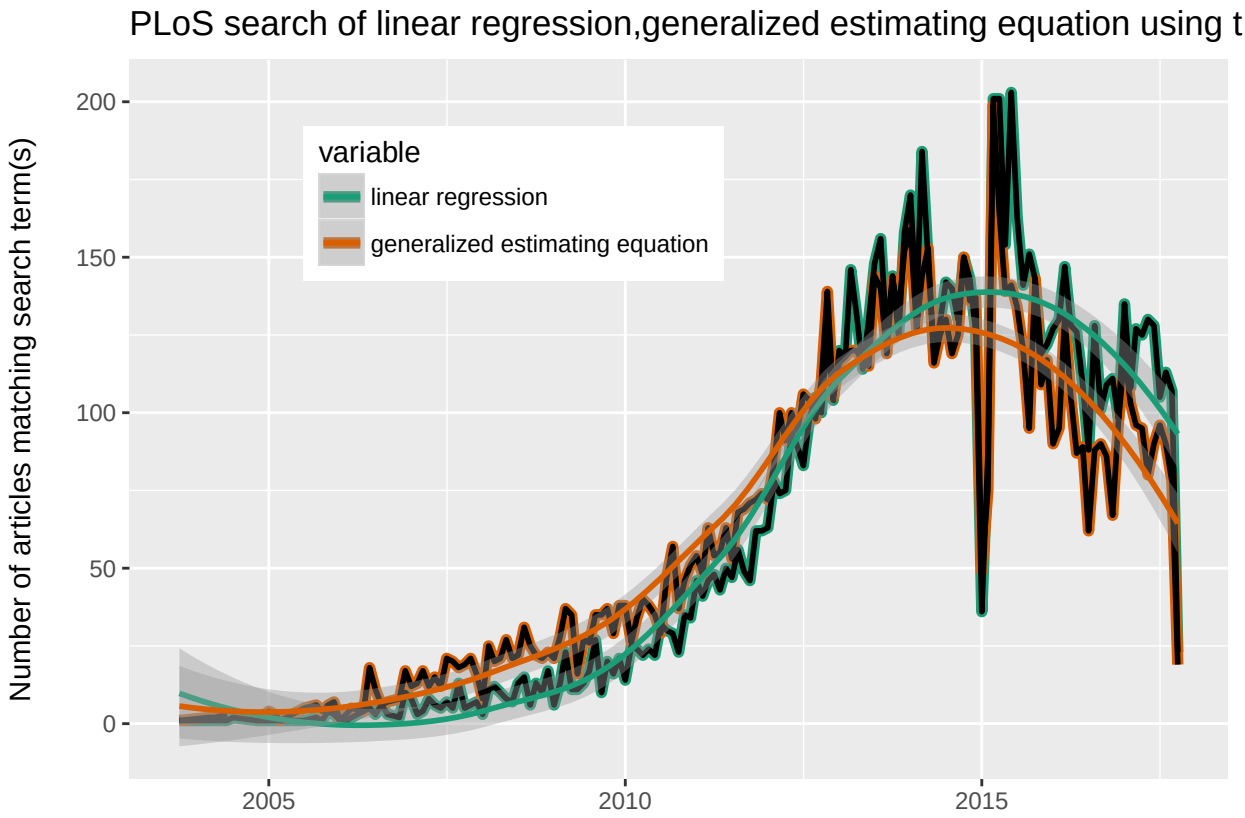

```
#pairwise comparisons linear regression


LR_MM<- plot_throughtime(terms=c("linear regression","mixed effect model"),limit=10000) + geom_line(siz

LR_MM
```

```
## Warning: Removed 8 rows containing non-finite values (stat_smooth).
## Warning: Removed 6 rows containing missing values (geom_path).
## Warning: Removed 6 rows containing missing values (geom_path).
```



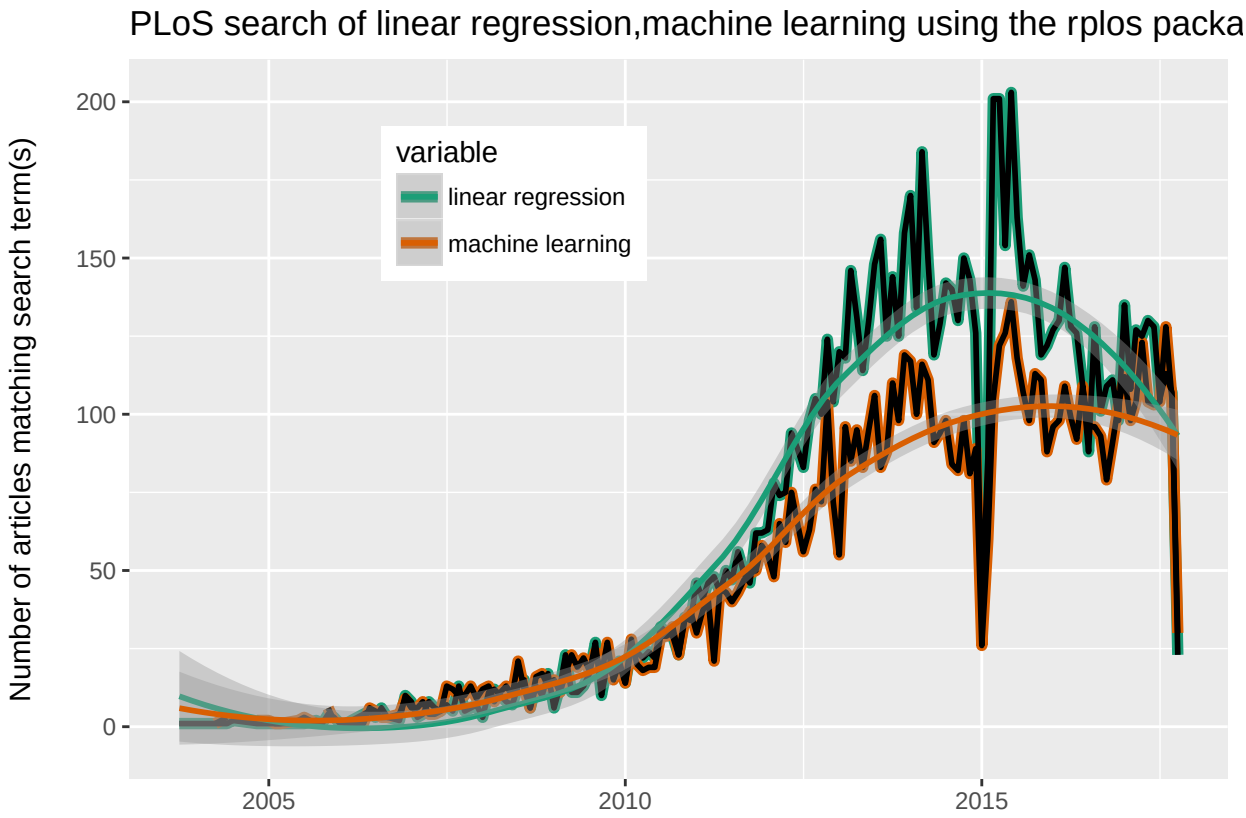

```
LR_GEE<- plot_throughtime(terms=c("linear regression","generalized estimating equation"),limit=10000) +
LR_GEE
```

```
## Warning: Removed 1 rows containing non-finite values (stat_smooth).
```



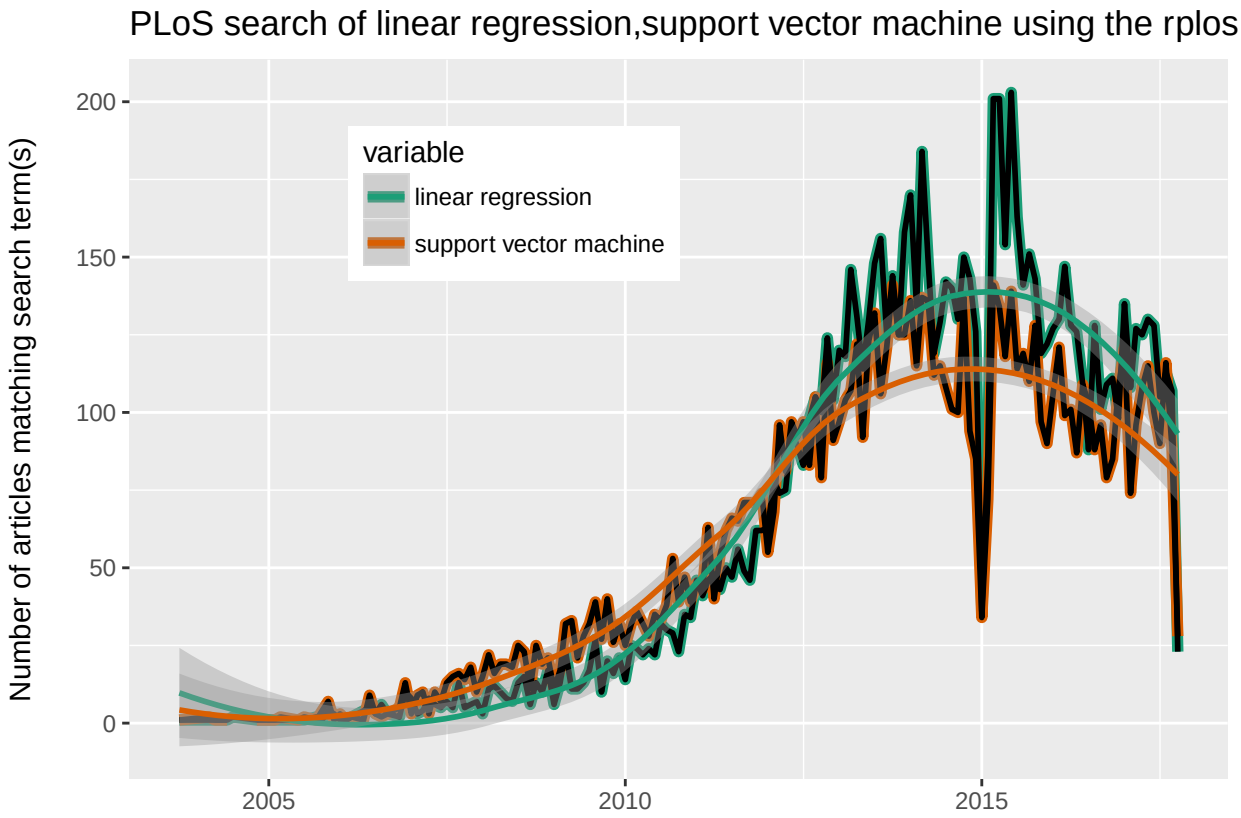

```
LR_ML<-  plot_throughtime(terms=c("linear regression","machine learning"),limit=10000) + geom_line(size=

LR_ML
```

```
## Warning: Removed 4 rows containing non-finite values (stat_smooth).
```




```
LR_SVM<-  plot_throughtime(terms=c("linear regression","support vector machine"),limit=10000) + geom_li

LR_SVM
```

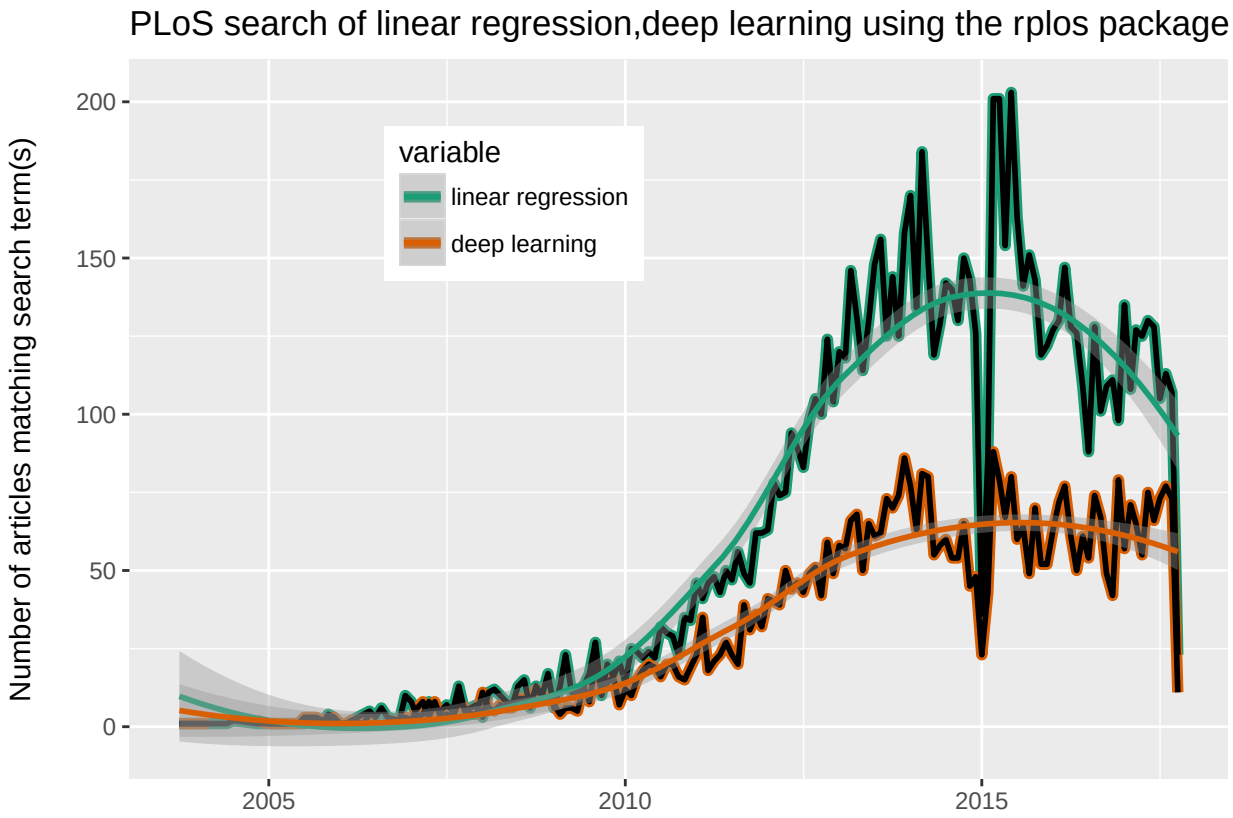
```
## Warning: Removed 1 rows containing non-finite values (stat_smooth).
```




```
LR_DL<-  plot_throughtime(terms=c("linear regression","deep learning"),limit=10000) + geom_line(size=1,
```

```
LR_DL
```

```
## Warning: Removed 4 rows containing non-finite values (stat_smooth).
```



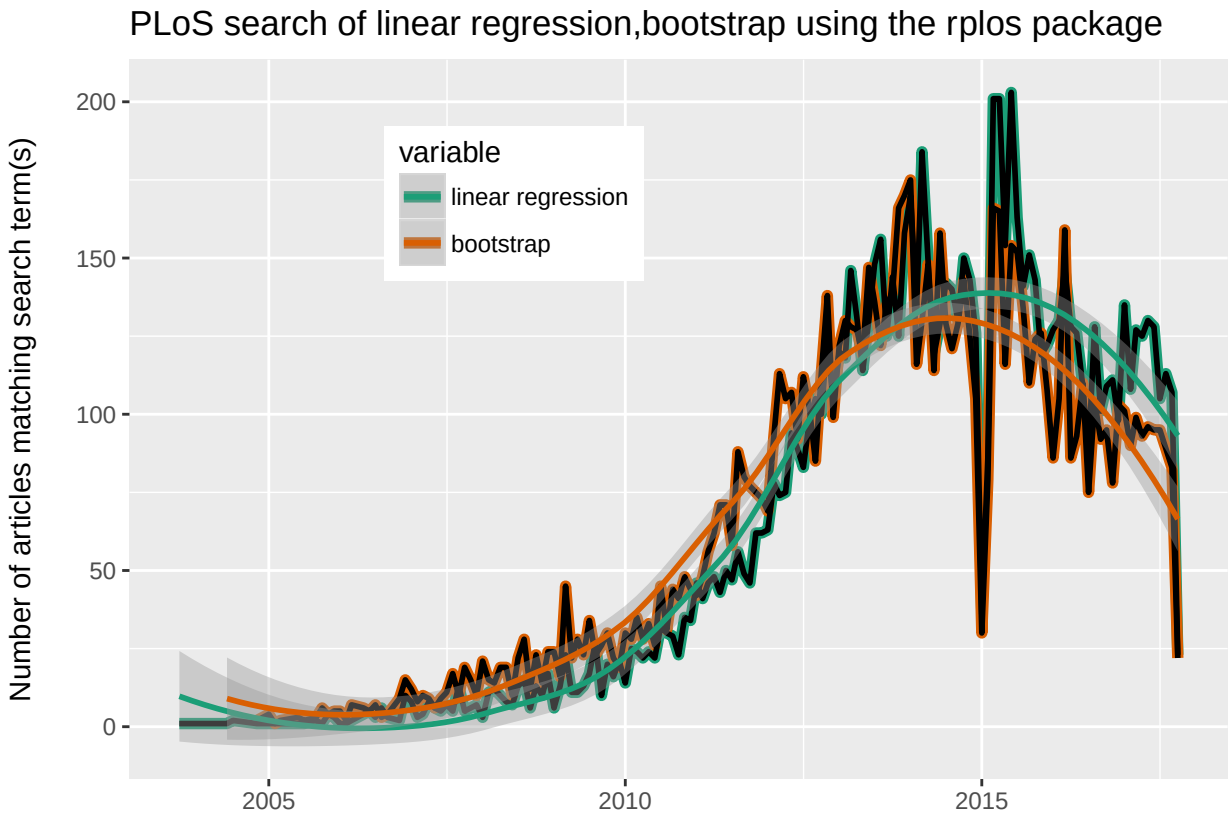

```
LR_Btstp<-  plot_throughtime(terms=c("linear regression","bootstrap"),limit=10000) + geom_line(size=1,c
```

```
LR_Btstp
```

```
## Warning: Removed 4 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 3 rows containing missing values (geom_path).
```

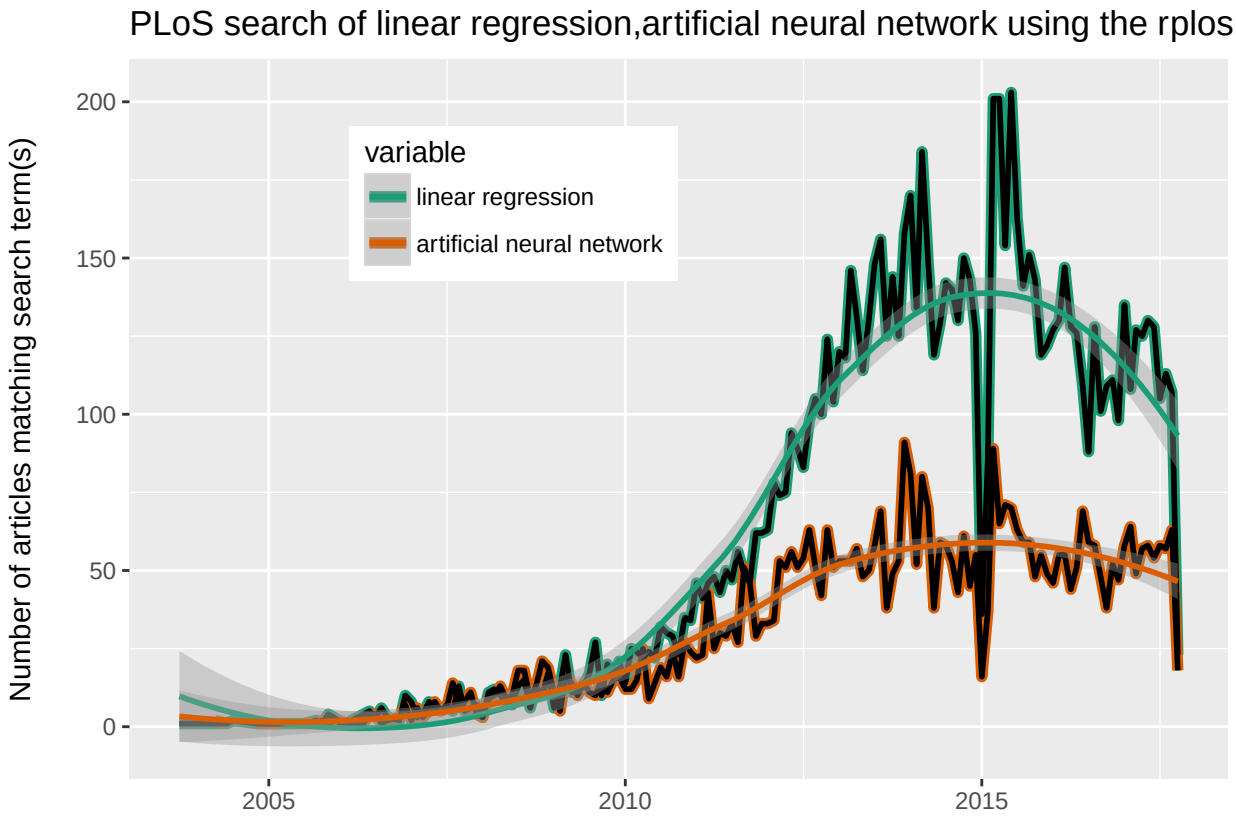
```
## Warning: Removed 3 rows containing missing values (geom_path).
```




```
LR_NN<-  plot_throughtime(terms=c("linear regression","artificial neural network"),limit=10000) + geom_
```

```
LR_NN
```

```
## Warning: Removed 3 rows containing non-finite values (stat_smooth).
```

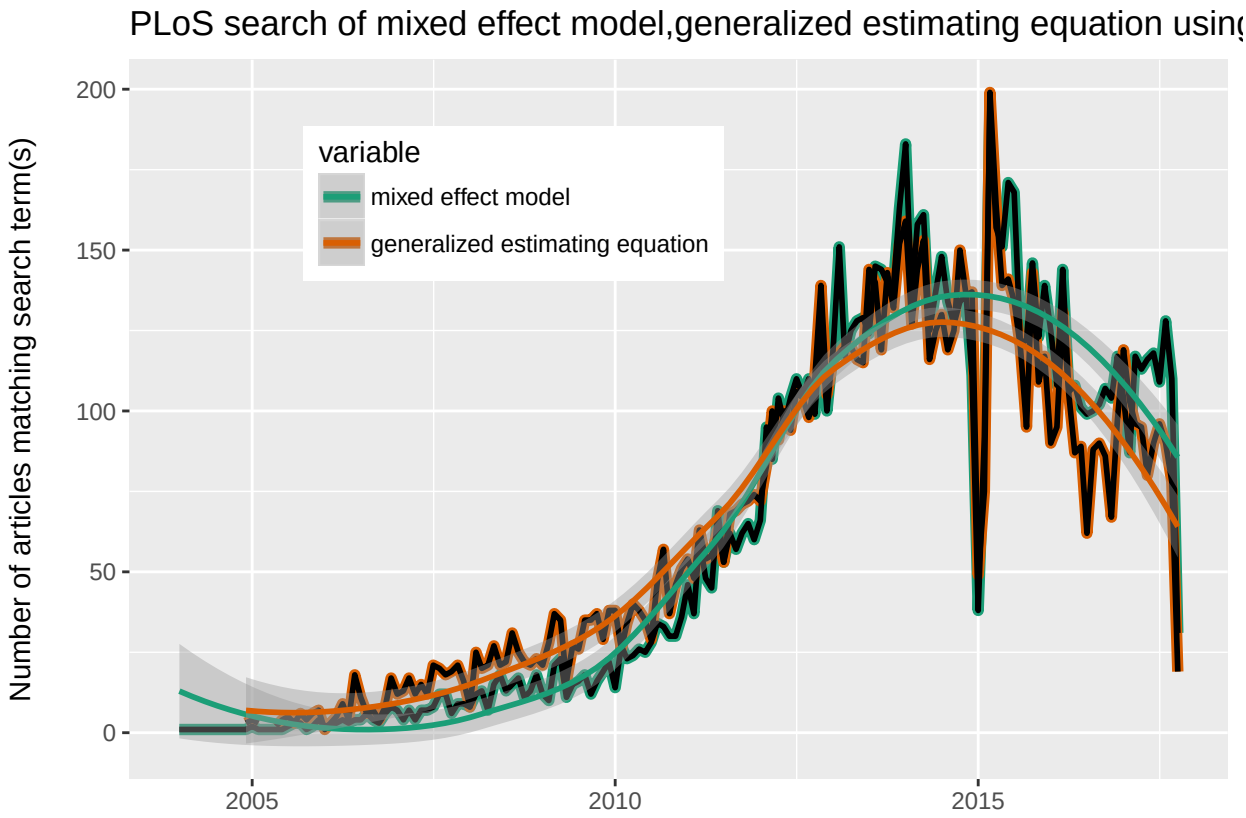



```
#pairwise comparisons mixed models



MM_GEE<- plot_throughtime(terms=c("mixed effect model","generalized estimating equation"),limit=10000) +
MM_GEE
```

```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
```

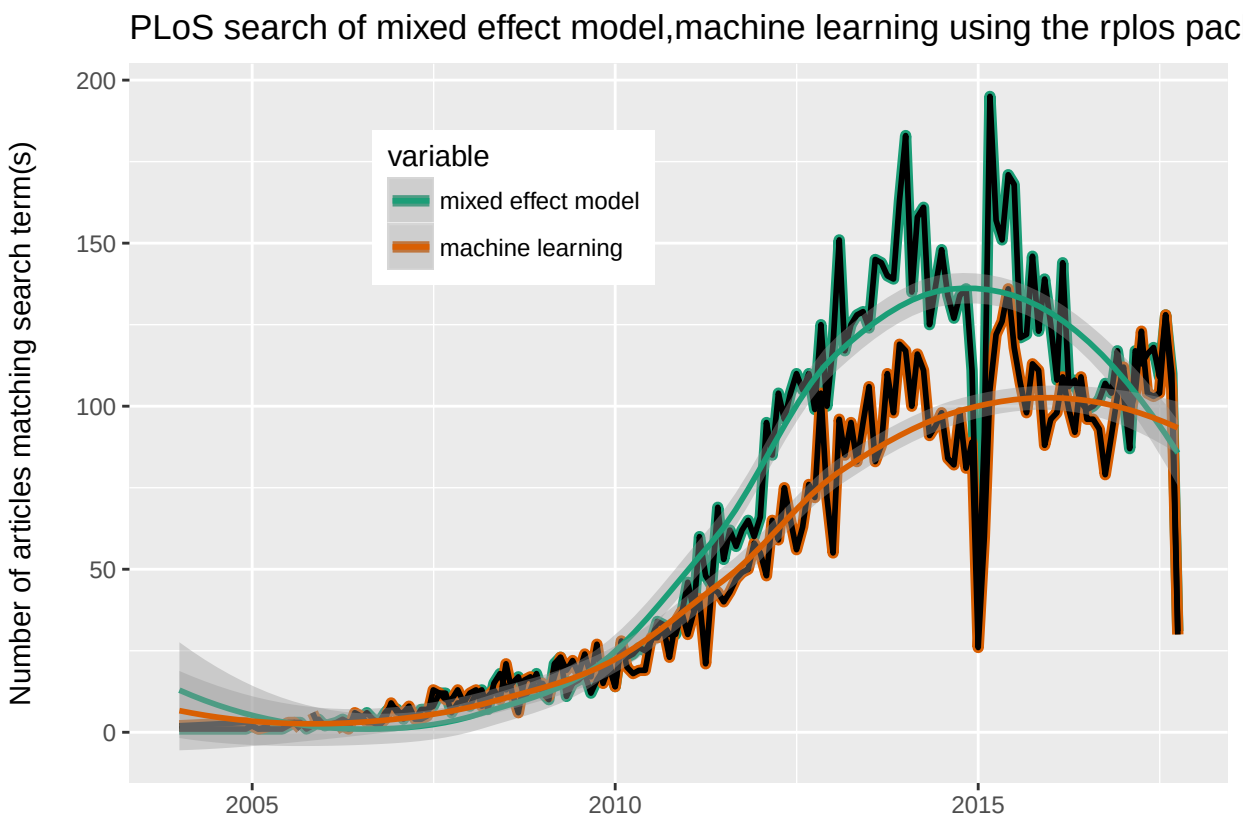
```
## Warning: Removed 1 rows containing missing values (geom_path).
```

```
## Warning: Removed 1 rows containing missing values (geom_path).
```



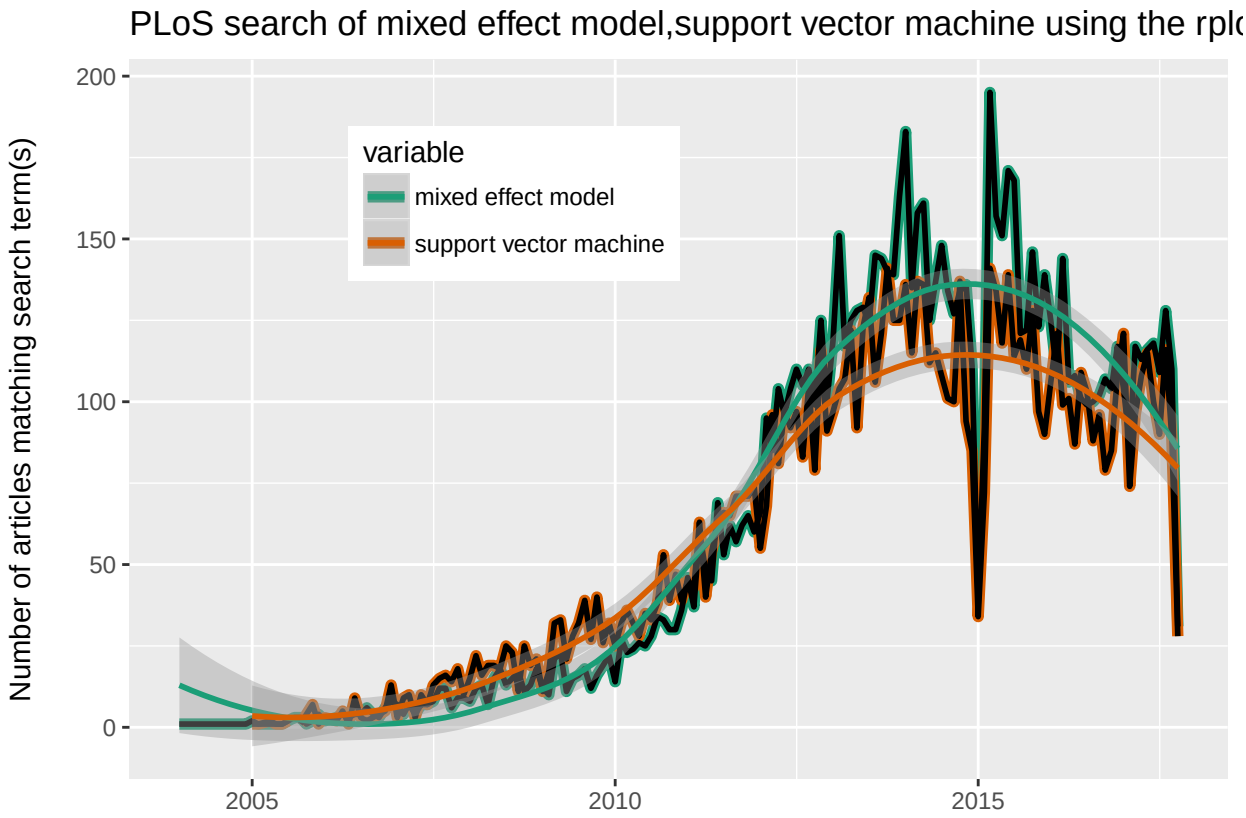

```
MM_ML<-  plot_throughtime(terms=c("mixed effect model","machine learning"),limit=10000) + geom_line(siz
MM_ML
```

```
## Warning: Removed 3 rows containing non-finite values (stat_smooth).
```



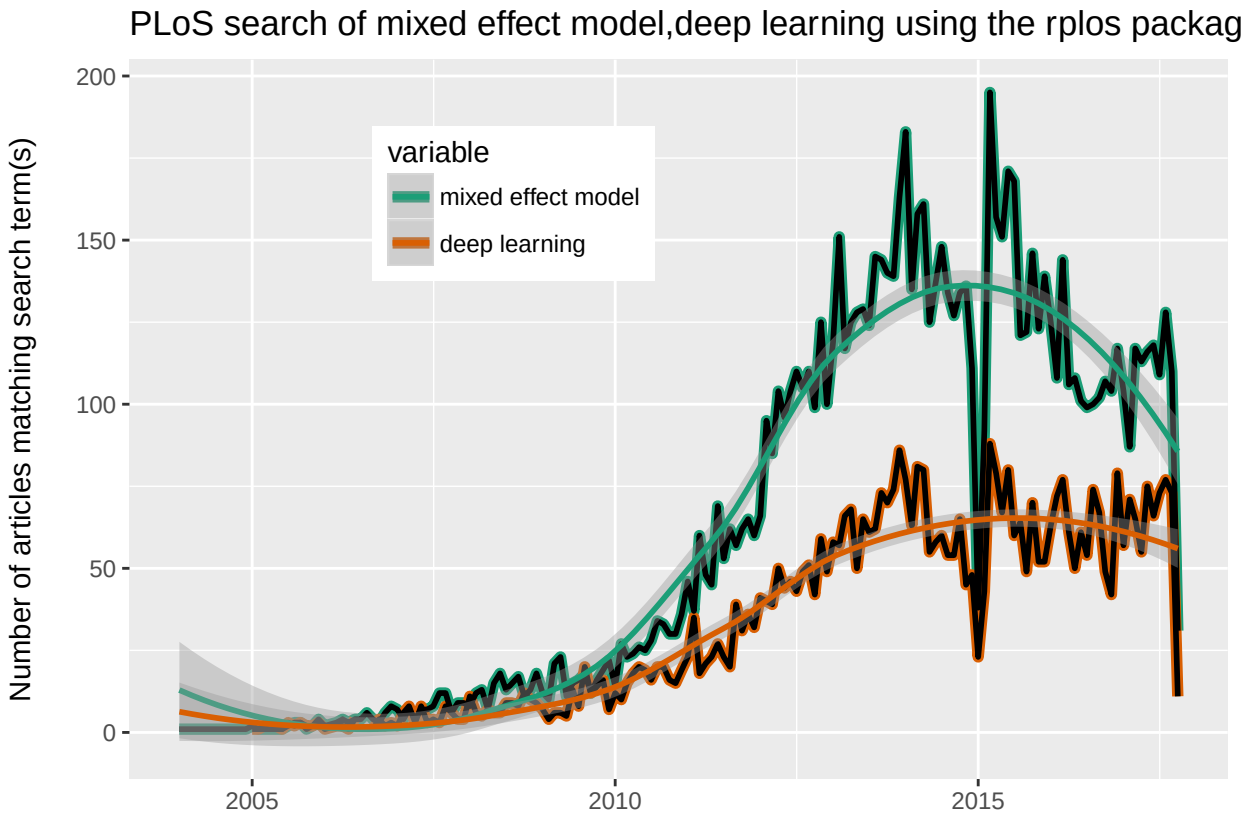

```
MM_SVM<-  plot_throughtime(terms=c("mixed effect model","support vector machine"),limit=10000) + geom_li

MM_SVM
```

```
## Warning: Removed 3 rows containing non-finite values (stat_smooth).
## Warning: Removed 2 rows containing missing values (geom_path).
## Warning: Removed 2 rows containing missing values (geom_path).
```



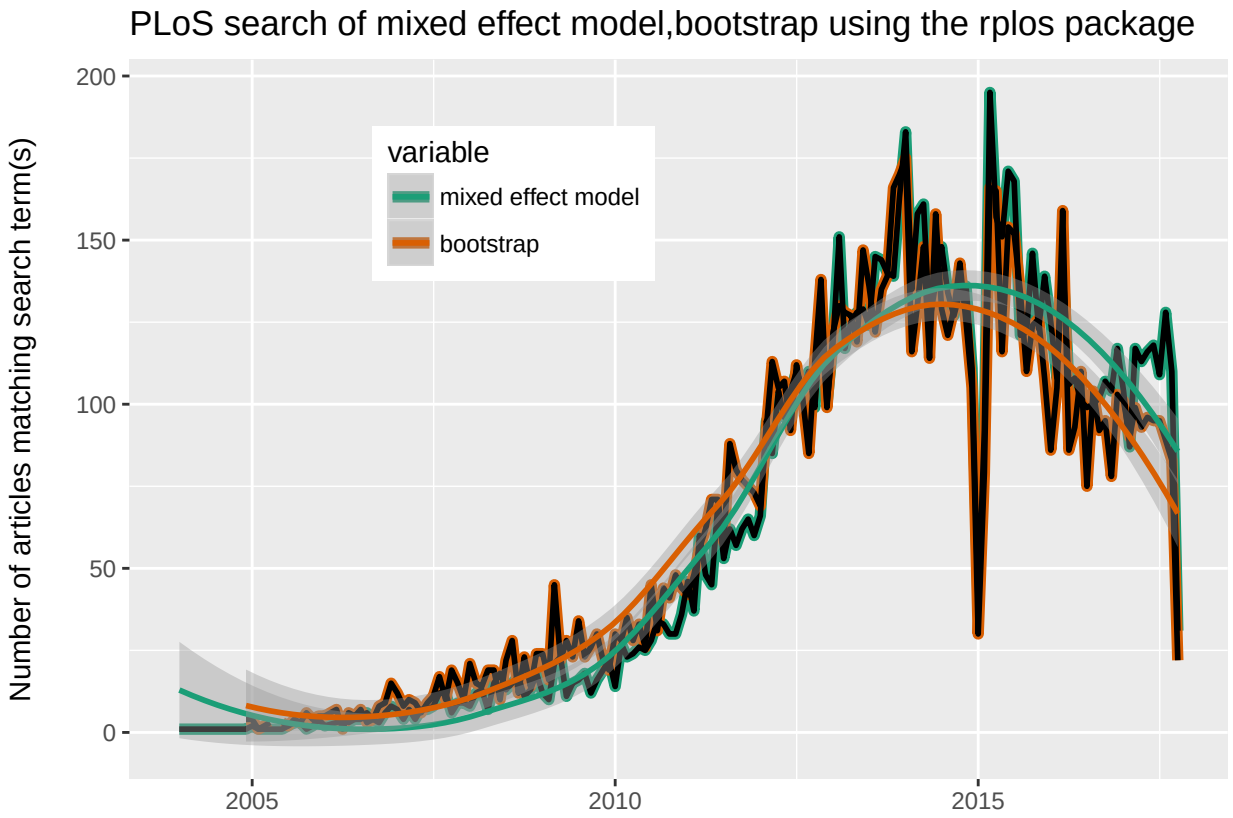

```
MM_DL<-  plot_throughtime(terms=c("mixed effect model","deep learning"),limit=10000) + geom_line(size=1

MM_DL
```

```
## Warning: Removed 3 rows containing non-finite values (stat_smooth).
```



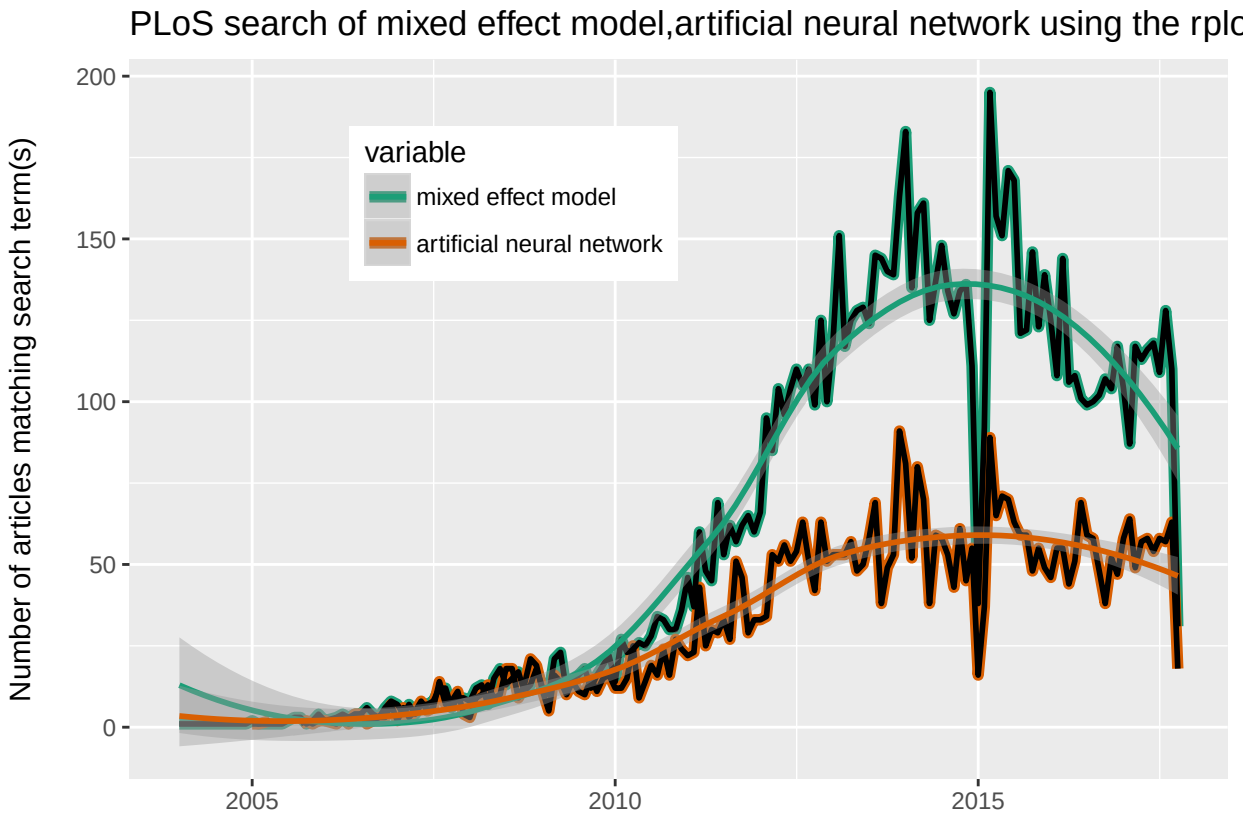

```
MM_Btstp<-  plot_throughtime(terms=c("mixed effect model","bootstrap"),limit=10000) + geom_line(size=1,

MM_Btstp
```

```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
## Warning: Removed 1 rows containing missing values (geom_path).
## Warning: Removed 1 rows containing missing values (geom_path).
```



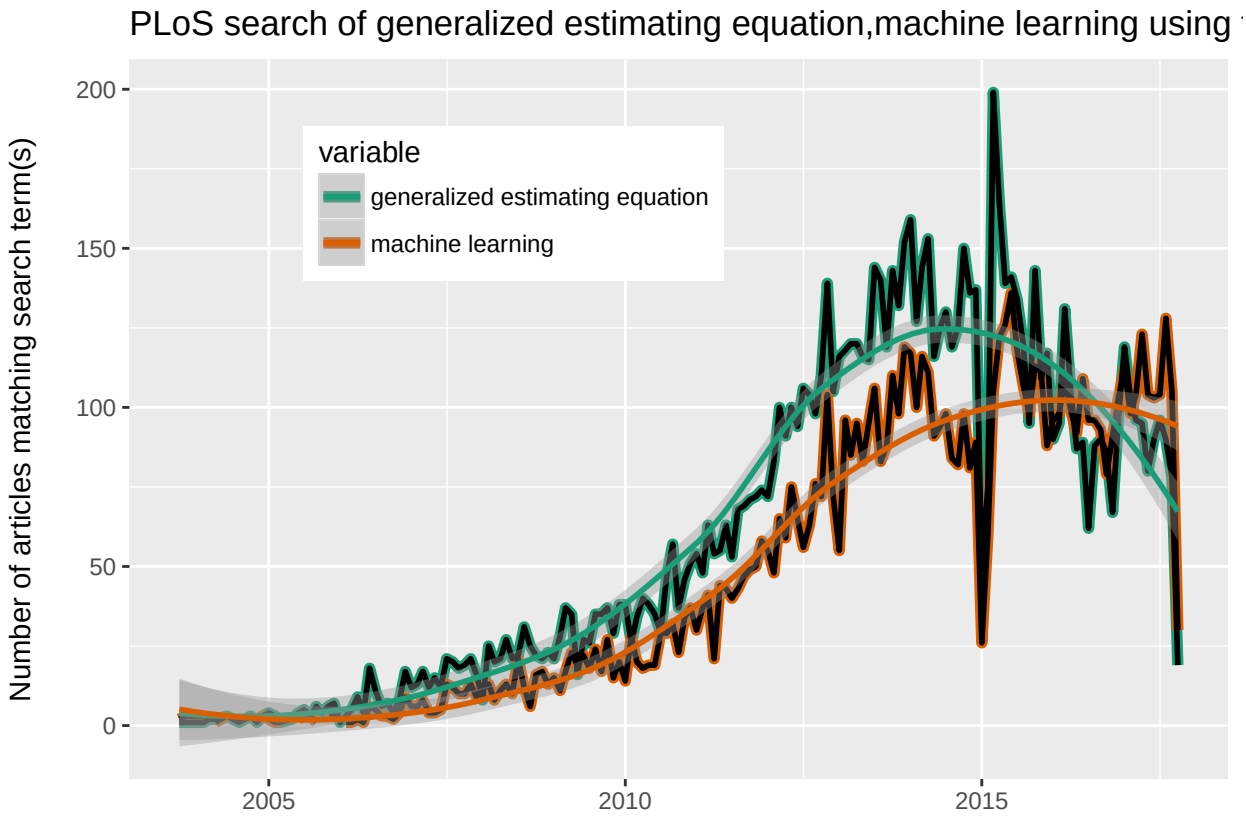

```
MM_NN<-  plot_throughtime(terms=c("mixed effect model","artificial neural network"),limit=10000) + geom_

MM_NN
```

```
## Warning: Removed 4 rows containing non-finite values (stat_smooth).
```



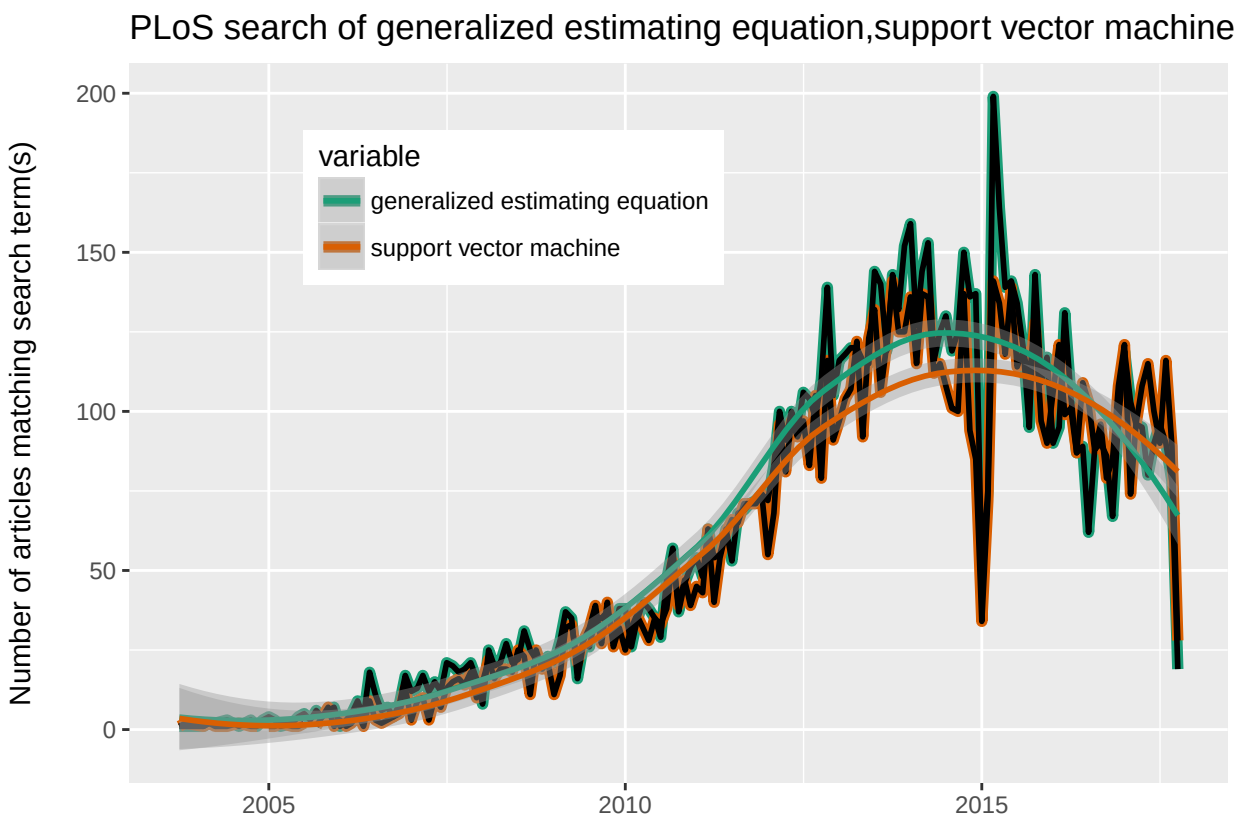

```
#pairwise comparisons gee

GEE_ML<-  plot_throughtime(terms=c("generalized estimating equation","machine learning"),limit=10000) +
GEE_ML
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
```



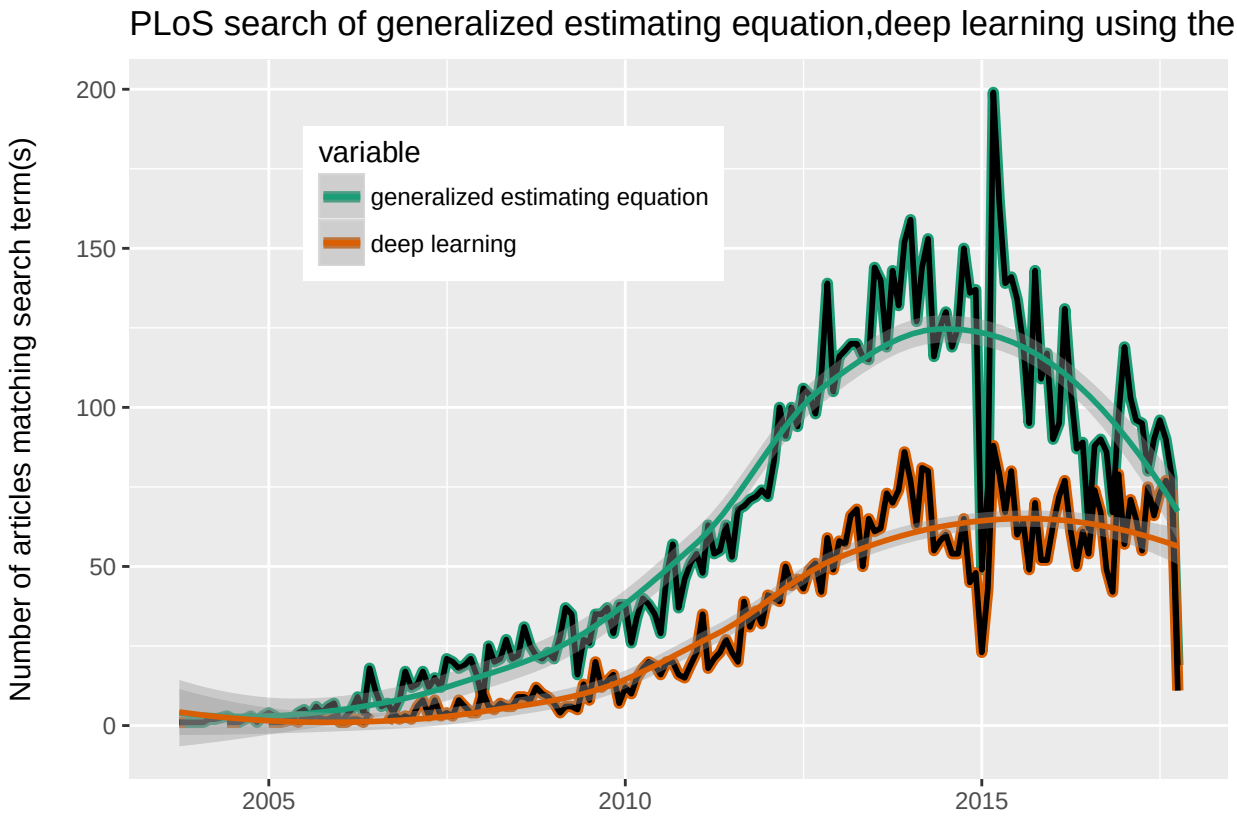

```
GEE_SVM<-  plot_throughtime(terms=c("generalized estimating equation","support vector machine"),limit=1

GEE_SVM
```

```
## Warning: Removed 2 rows containing non-finite values (stat_smooth).
```



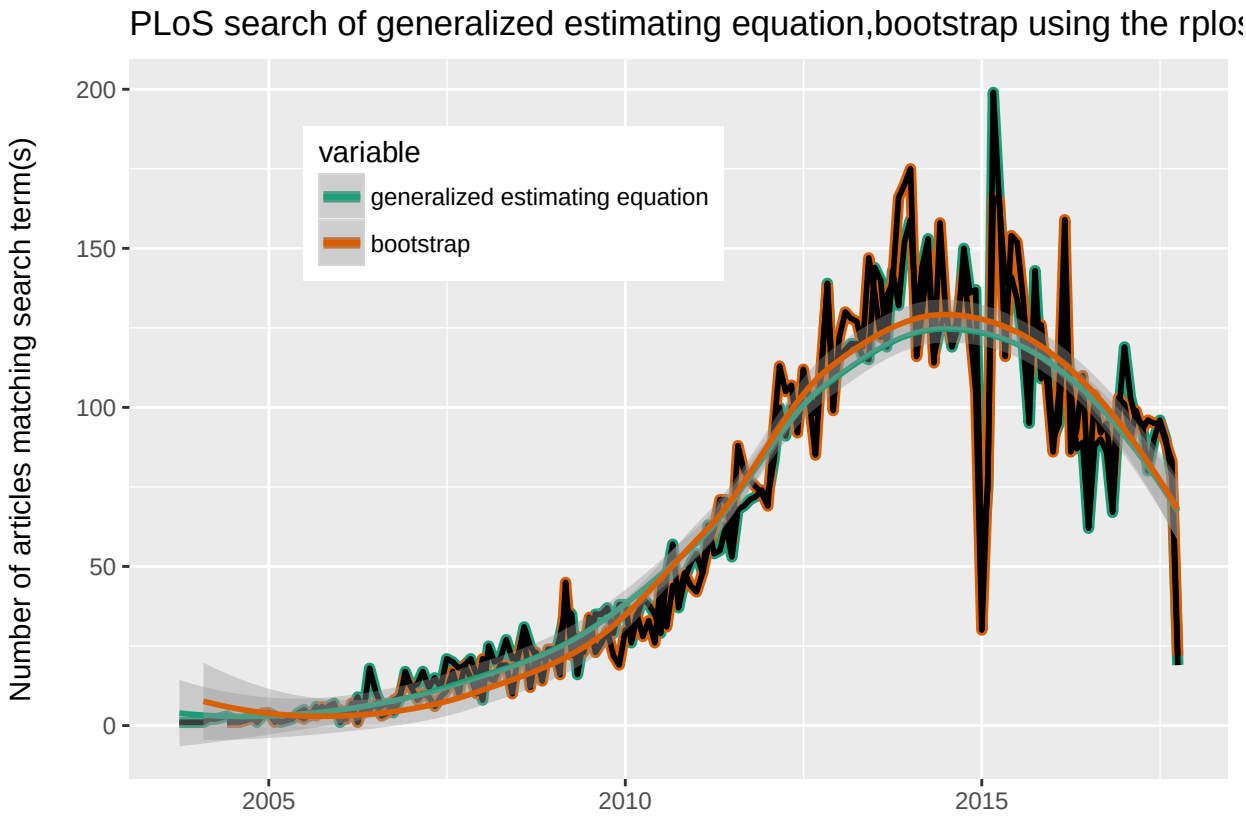

```
GEE_DL<-  plot_throughtime(terms=c("generalized estimating equation","deep learning"),limit=10000) + ge

GEE_DL
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
```



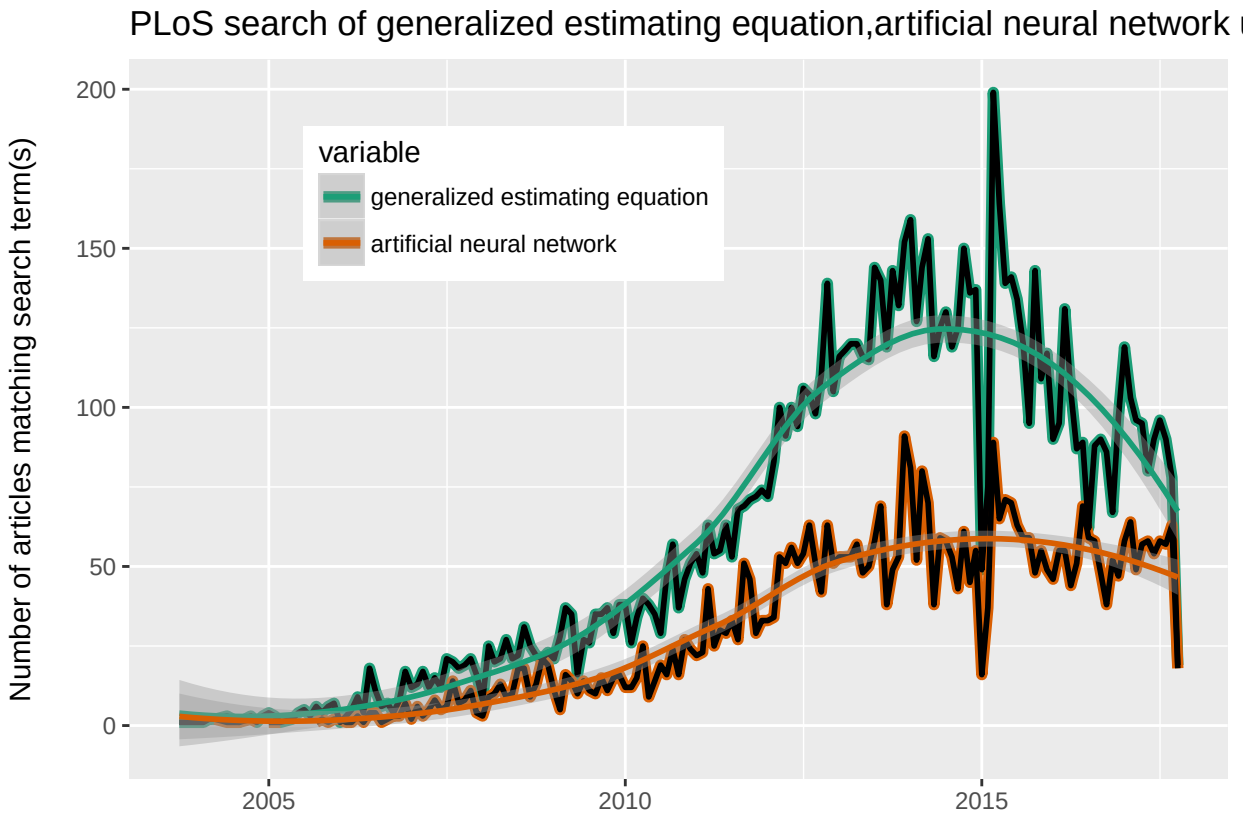

```
GEE_Btstp<-  plot_throughtime(terms=c("generalized estimating equation","bootstrap"),limit=10000) + geo

GEE_Btstp
```

```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).
## Warning: Removed 2 rows containing missing values (geom_path).
## Warning: Removed 2 rows containing missing values (geom_path).
```



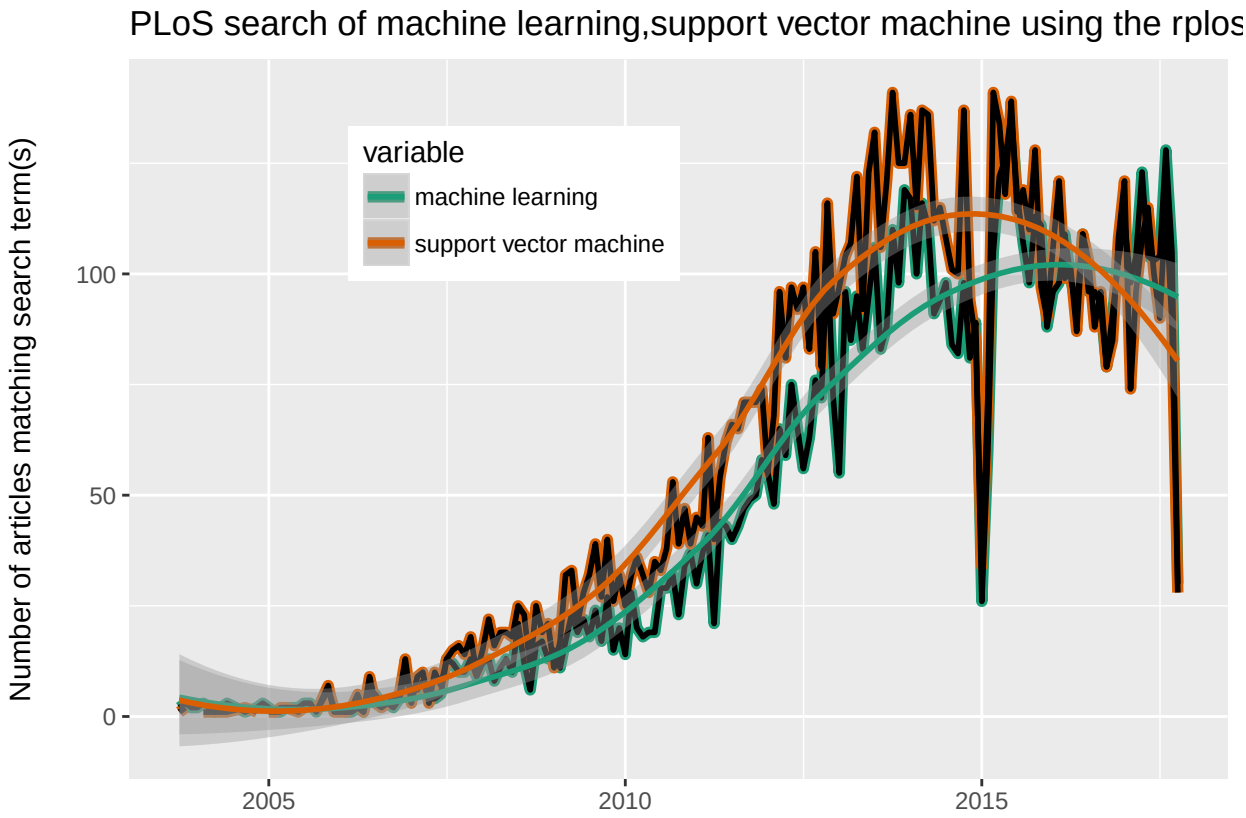

```
GEE_NN<-  plot_throughtime(terms=c("generalized estimating equation","artificial neural network"),limit=

GEE_NN
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
```




```
#pairwise comparisons machine learning

ML_SVM<-  plot_throughtime(terms=c("machine learning","support vector machine"),limit=10000) + geom_lin

ML_SVM
```

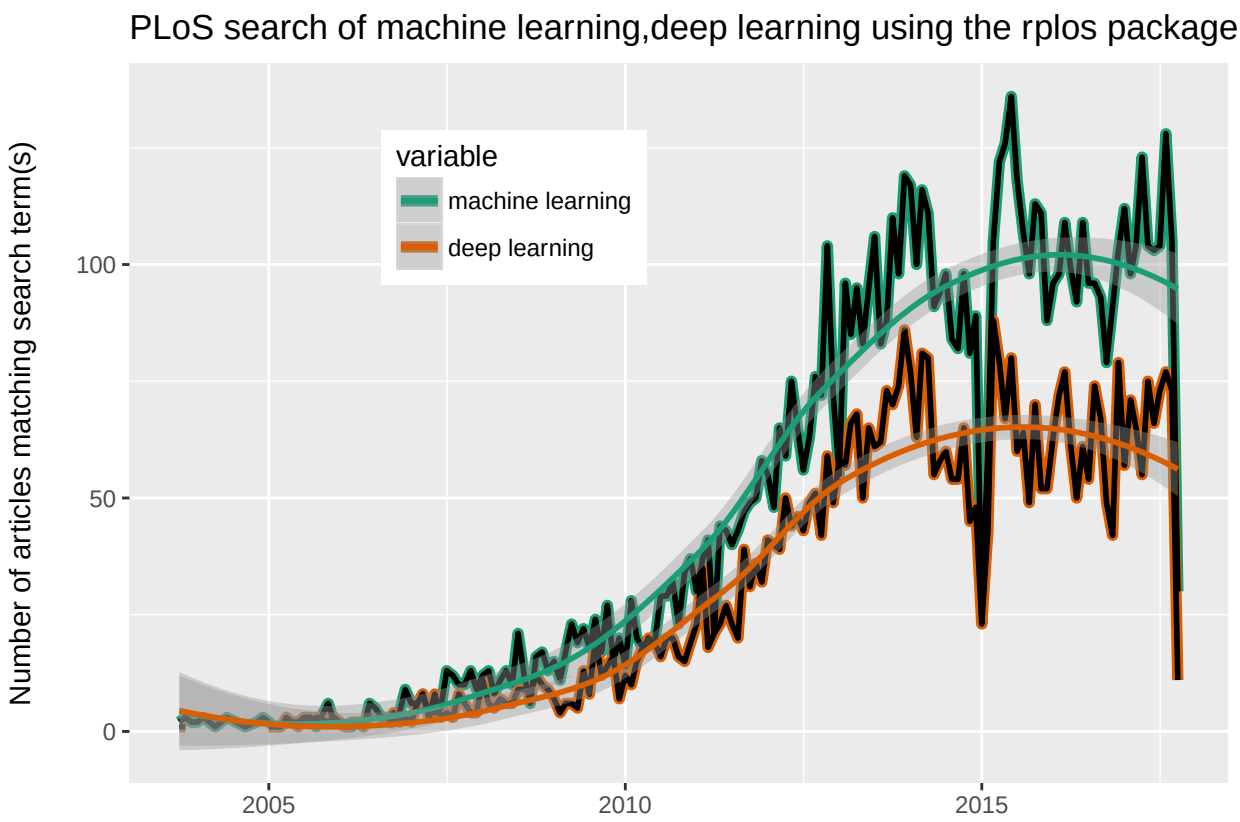
```
## Warning: Removed 4 rows containing non-finite values (stat_smooth).
```




```
ML_DL<-  plot_throughtime(terms=c("machine learning","deep learning"),limit=10000) + geom_line(size=1,c
```

```
ML_DL
```

```
## Warning: Removed 7 rows containing non-finite values (stat_smooth).
```




```
ML_Btstp<-  plot_throughtime(terms=c("machine learning","bootstrap"),limit=10000) + geom_line(size=1,co
```

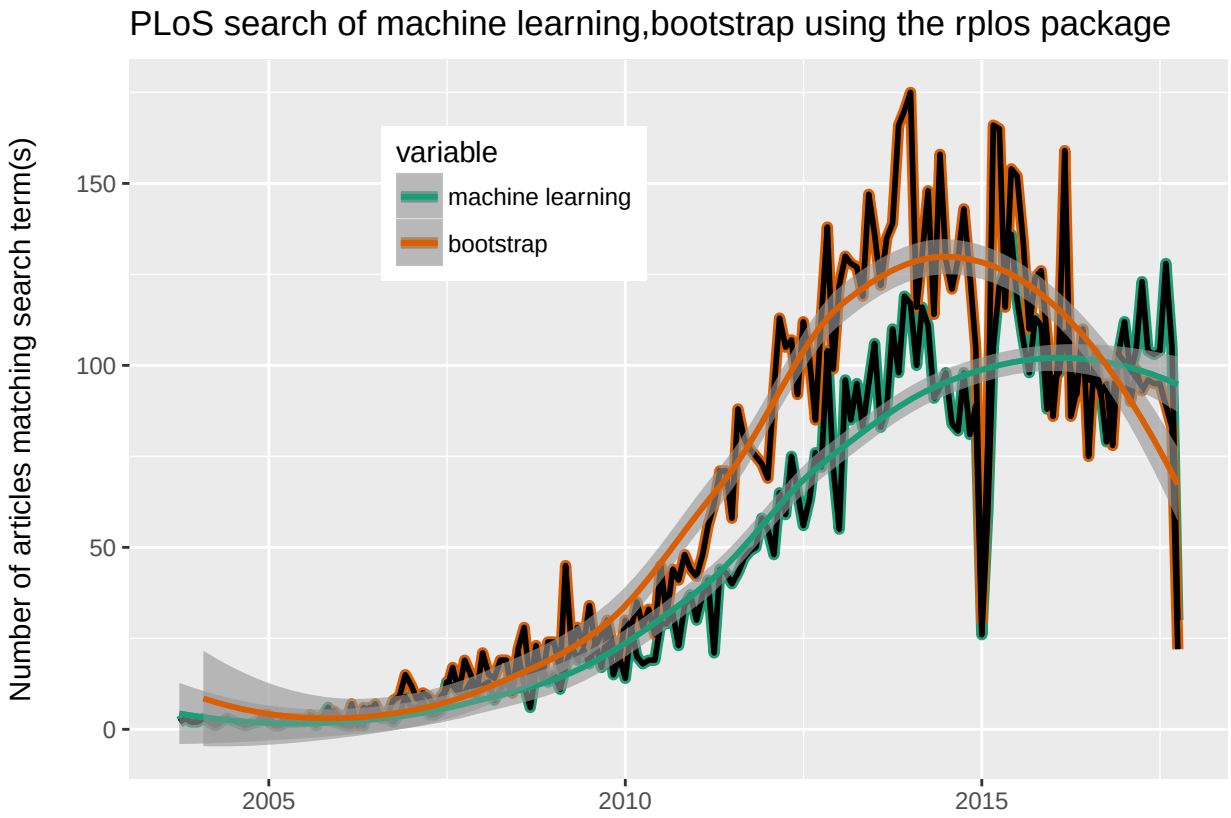
```
ML_Btstp
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
```

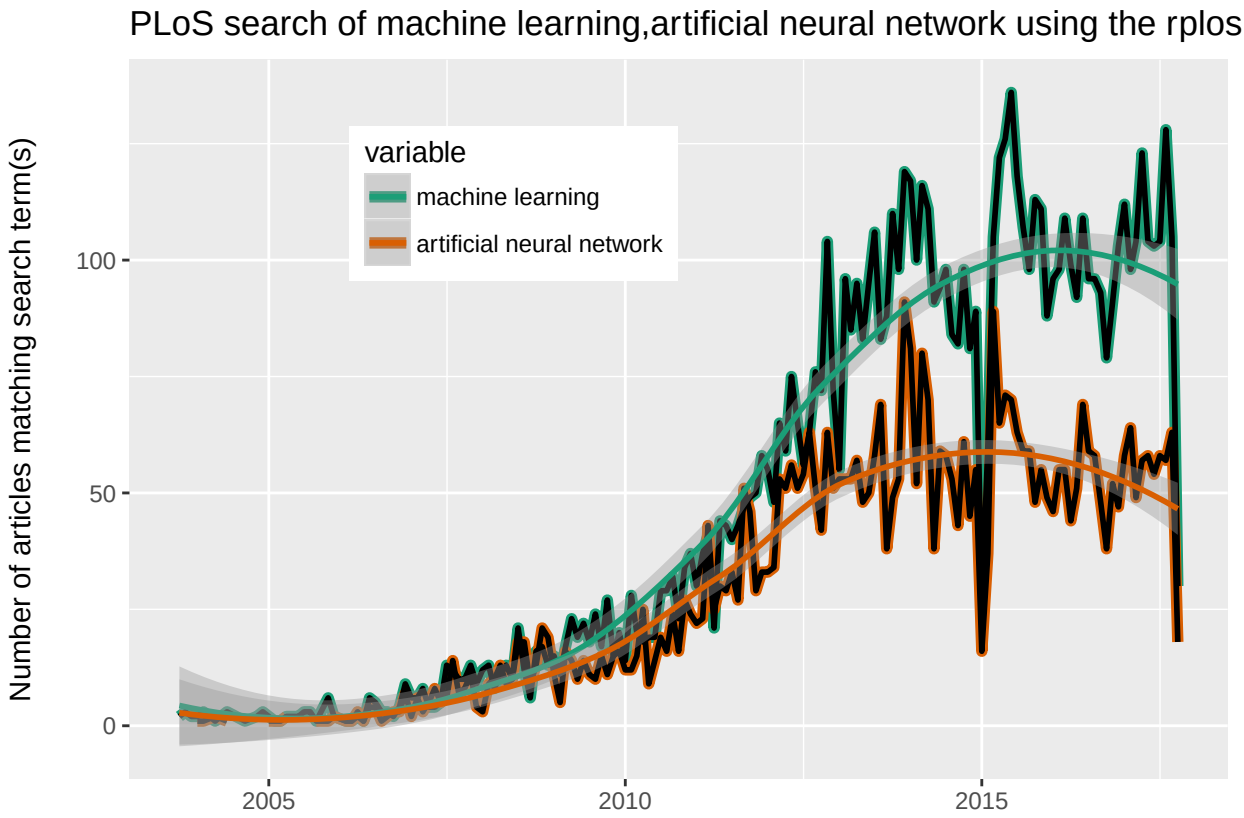
```
## Warning: Removed 4 rows containing missing values (geom_path).
```

```
## Warning: Removed 4 rows containing missing values (geom_path).
```



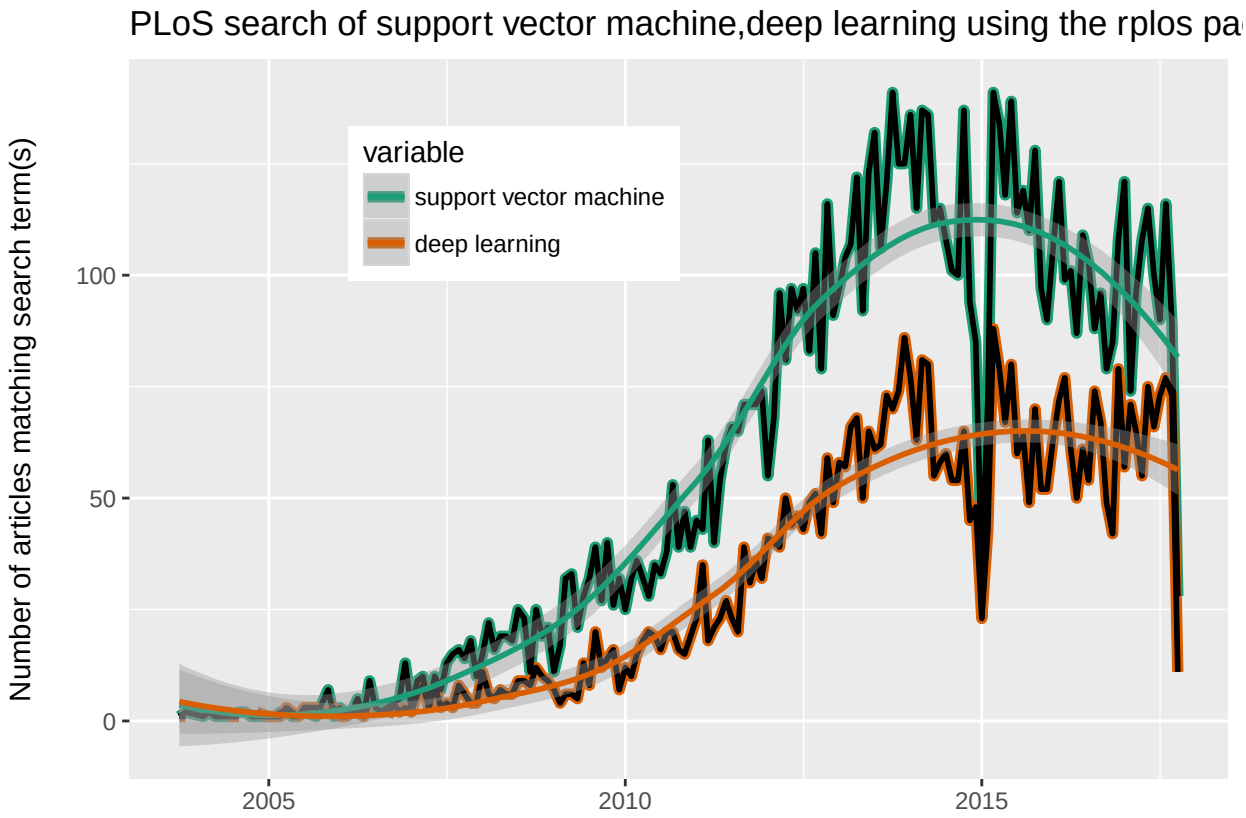

```
ML_NN<-  plot_throughtime(terms=c("machine learning","artificial neural network"),limit=10000) + geom_li

ML_NN
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
```



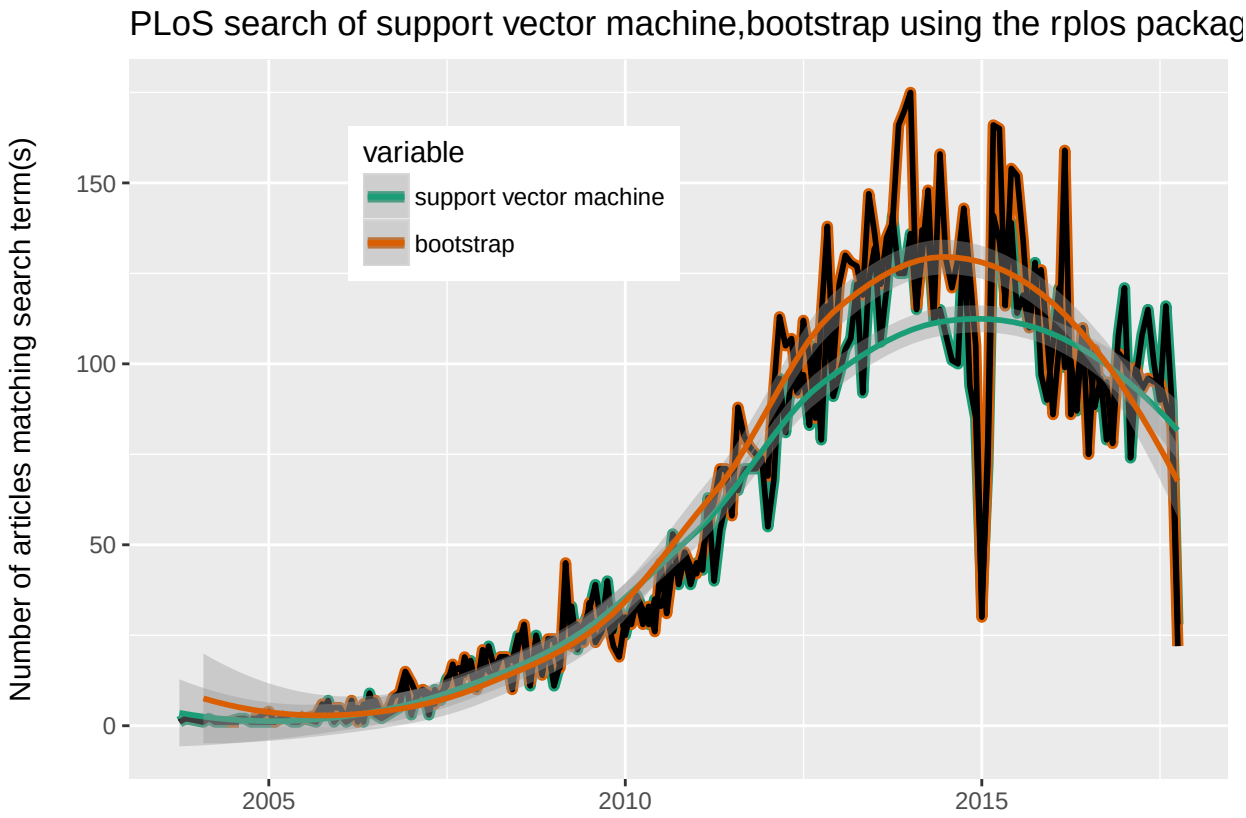

```
#pairwise comparisons support vector machine


SVM_DL<-  plot_throughtime(terms=c("support vector machine","deep learning"),limit=10000) + geom_line(s

SVM_DL
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
```



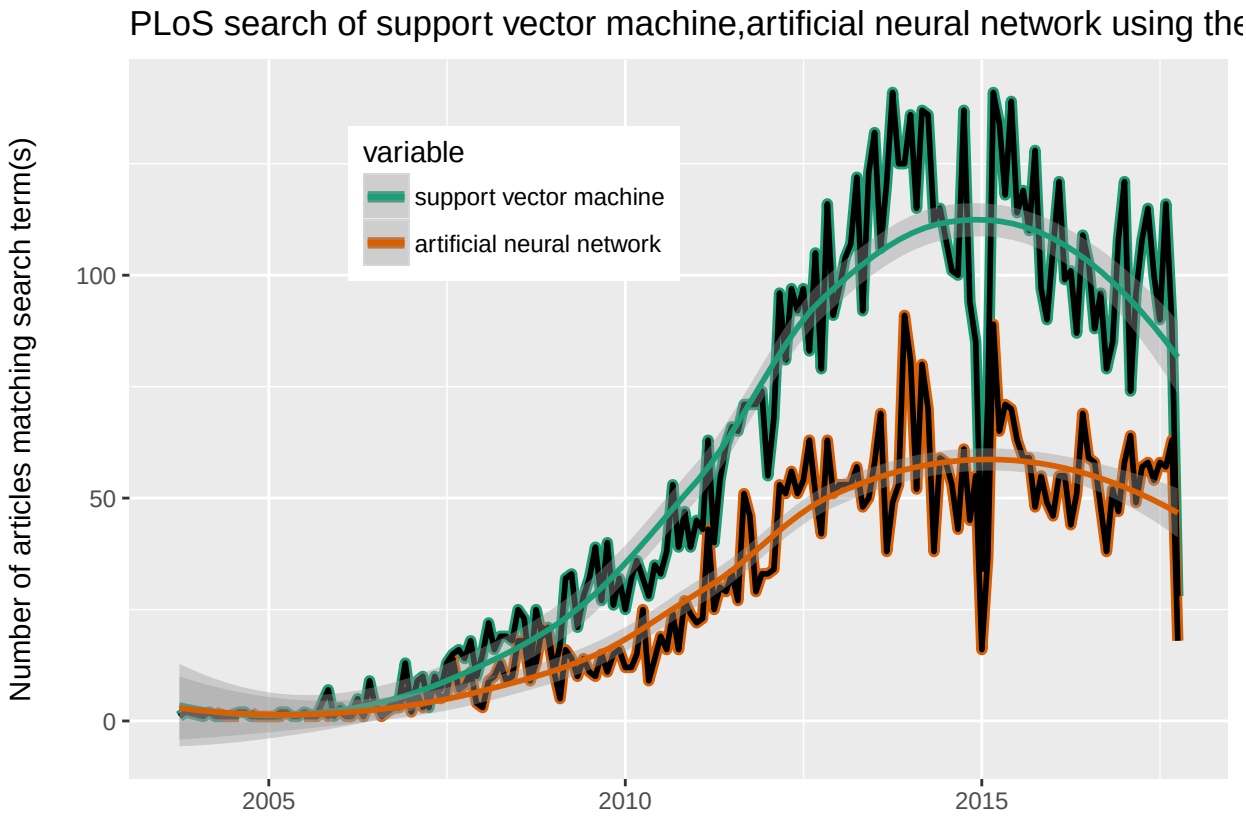

```
SVM_Btstp<-  plot_throughtime(terms=c("support vector machine","bootstrap"),limit=10000) + geom_line(si

SVM_Btstp
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
## Warning: Removed 2 rows containing missing values (geom_path).
## Warning: Removed 2 rows containing missing values (geom_path).
```



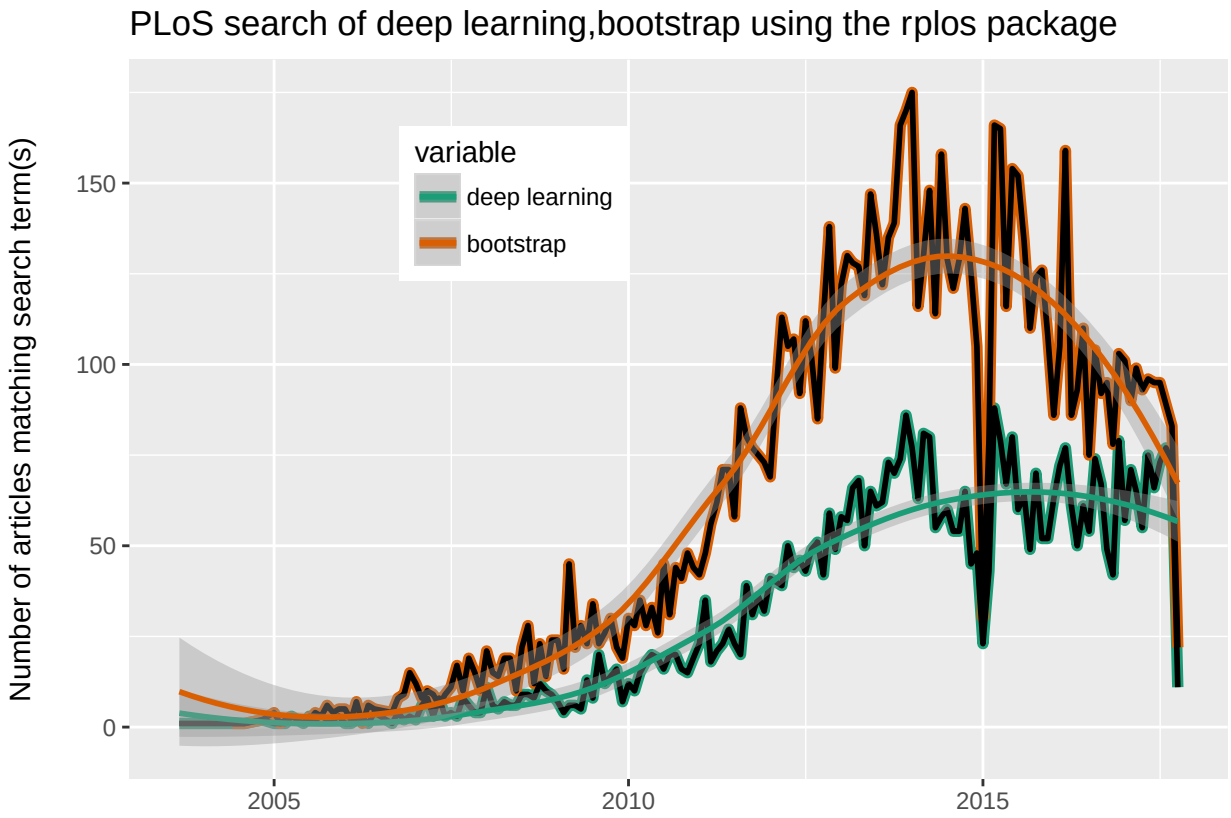

```
SVM_NN<-  plot_throughtime(terms=c("support vector machine","artificial neural network"),limit=10000) +

SVM_NN
```

```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).
```



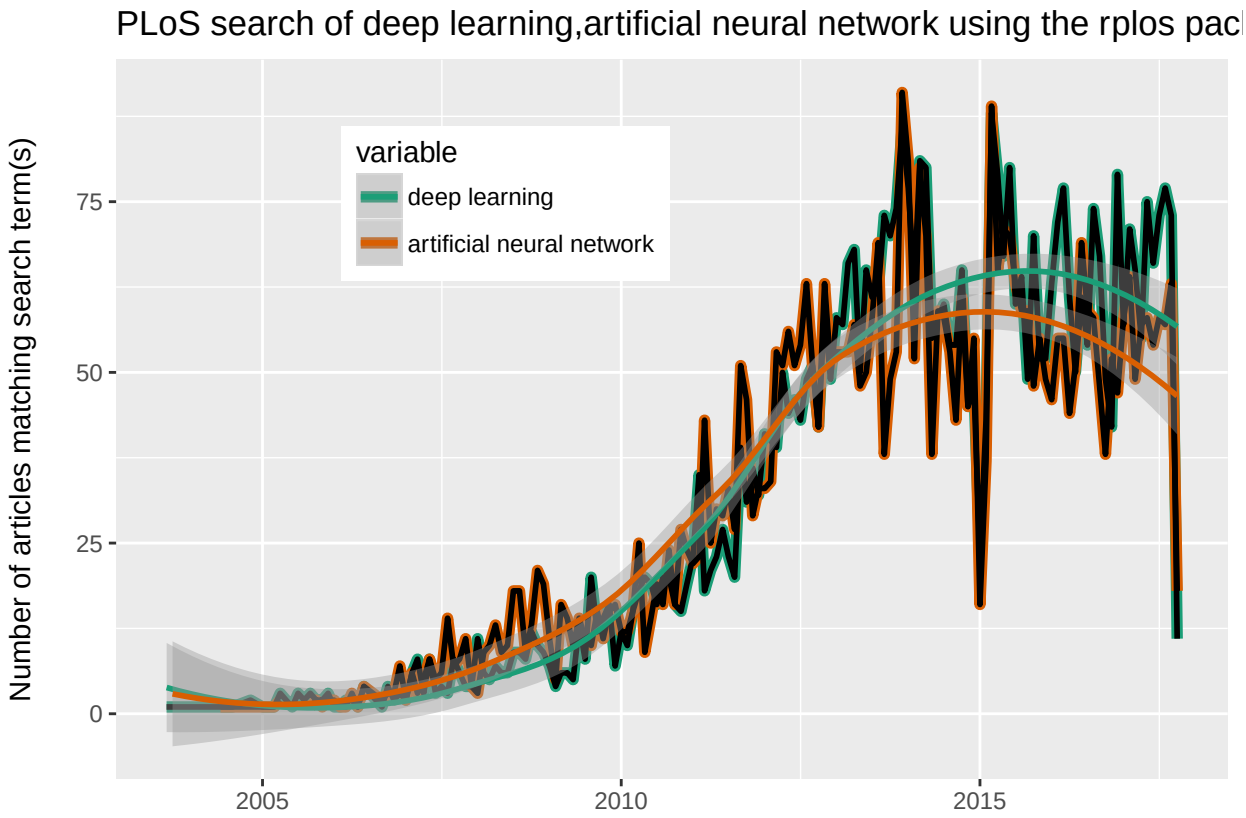

```
#pairwise comparisons deep learning


DL_Btstp<-  plot_throughtime(terms=c("deep learning","bootstrap"),limit=10000) + geom_line(size=1,color=

DL_Btstp
```

```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).
```



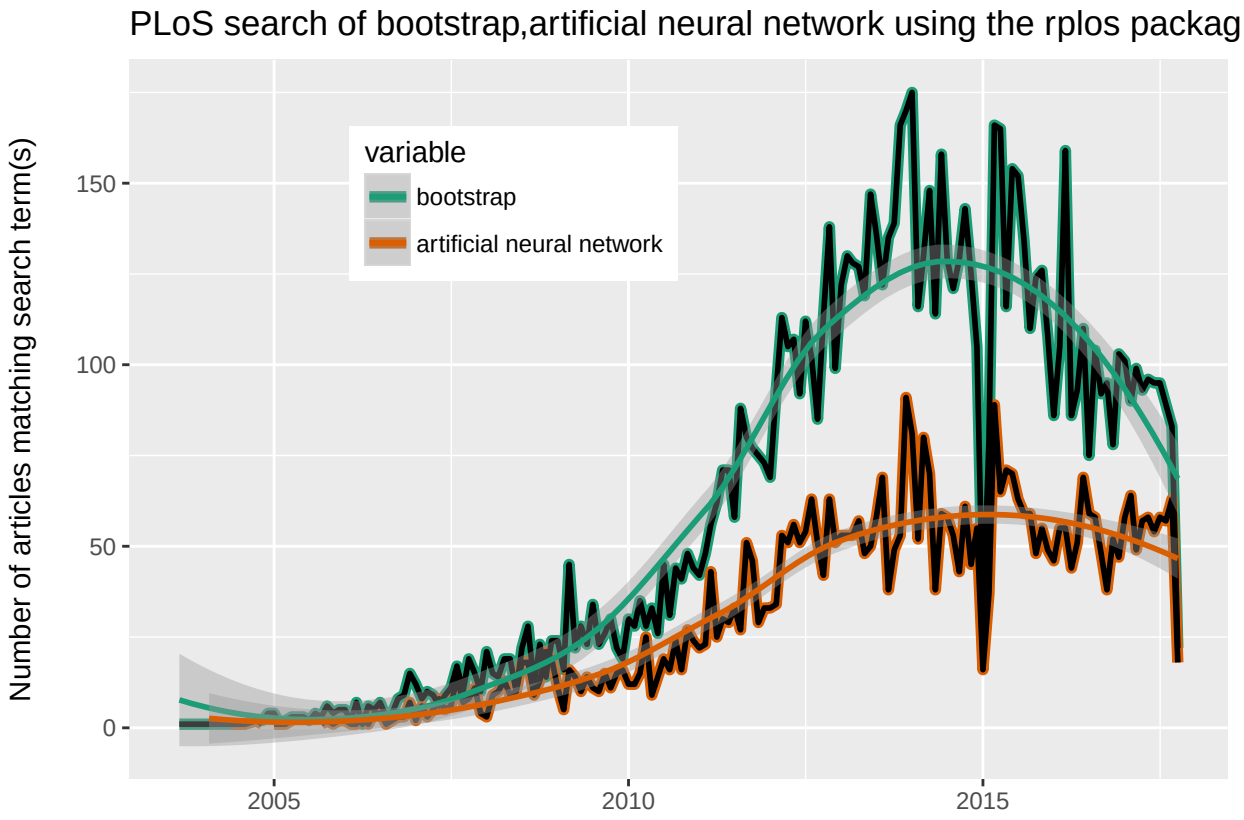

```
DL_NN<-  plot_throughtime(terms=c("deep learning","artificial neural network"),limit=10000) + geom_line

DL_NN
```

```
## Warning: Removed 6 rows containing non-finite values (stat_smooth).
## Warning: Removed 1 rows containing missing values (geom_path).
## Warning: Removed 1 rows containing missing values (geom_path).
```




```
#pairwise comparisons bootstrap


Btstp_NN<-  plot_throughtime(terms=c("bootstrap","artificial neural network"),limit=10000) + geom_line(s

Btstp_NN
```

```
## Warning: Removed 5 rows containing non-finite values (stat_smooth).

## Warning: Removed 1 rows containing missing values (geom_path).

## Warning: Removed 1 rows containing missing values (geom_path).
```


PLoS search of bootstrap,artificial neural network using the rplos packag
Number of articles matching search term(s)
150
100
50
0
2005
2010
2015
variable
bootstrap
artificial neural network