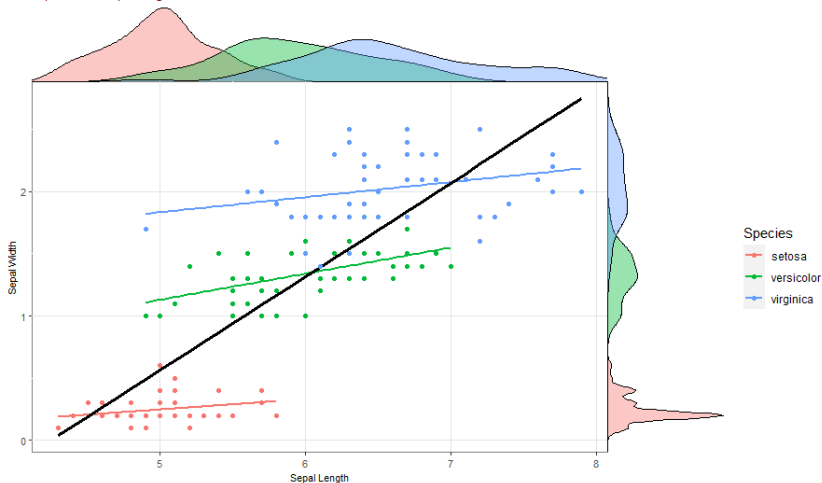


Visualization of Iris dataset

Scatterplot with different regression lines and marginal densities

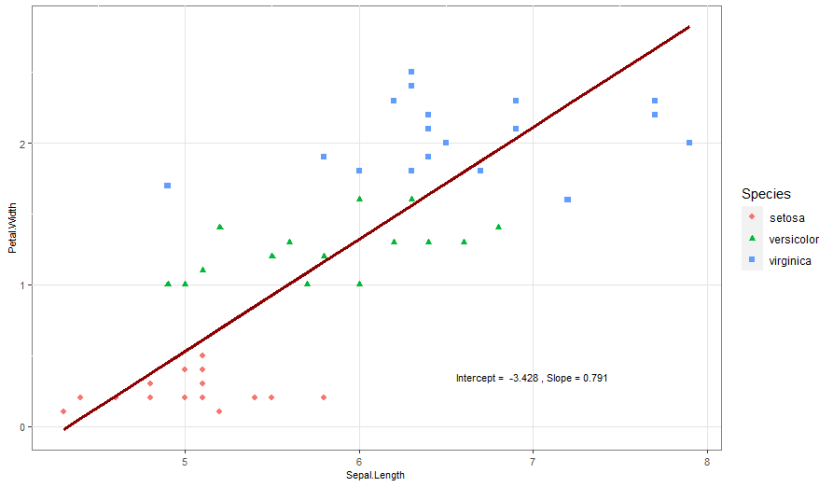
Sepal Width x Sepal Length from Iris dataset



Simple Linear Regression

Scatterplot - Linear Regression model

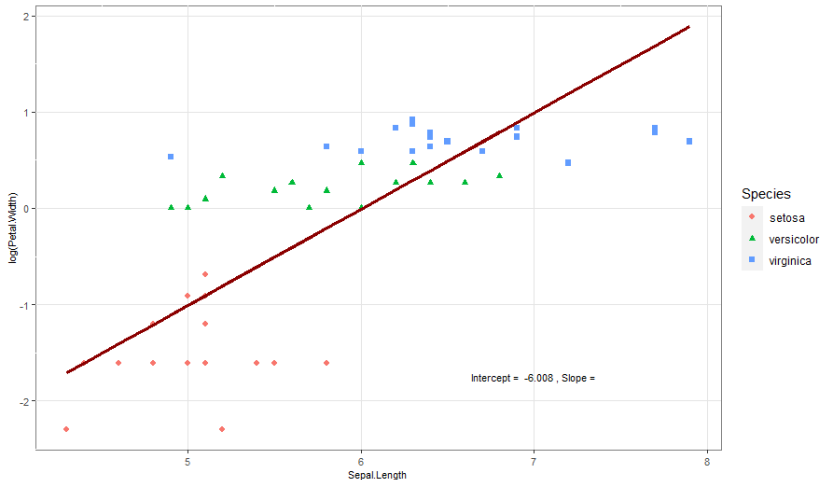
Sepal.Length x Petal.Width on Iris testing dataset



Simple Log-Linear Regression

Scatterplot - Log-Linear Regression model

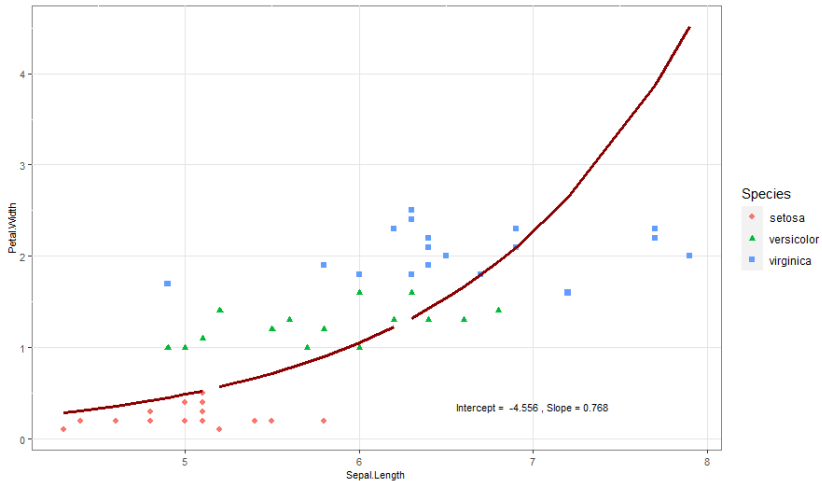
Sepal.Length x Petal.Width on Iris testing dataset



Negative Binomial Regression

Scatterplot - Negative Binomial Regression model

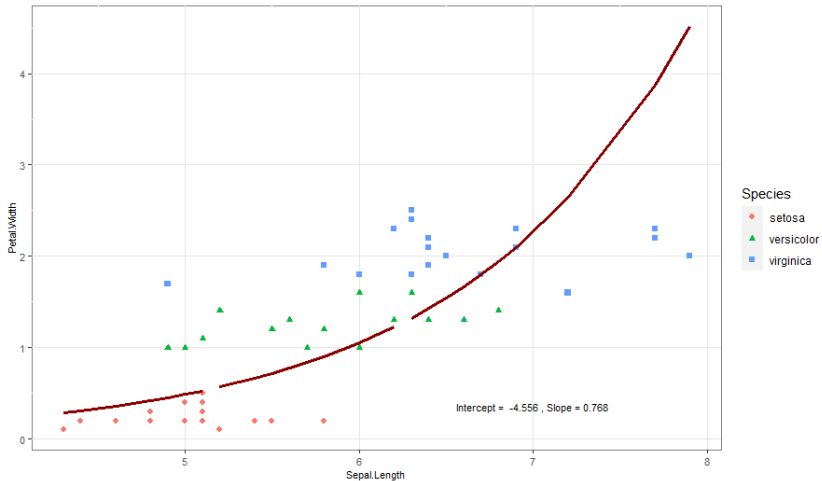
Sepal.Length x Petal.Width on Iris testing dataset



Poisson Regression

Scatterplot - Poisson Regression model

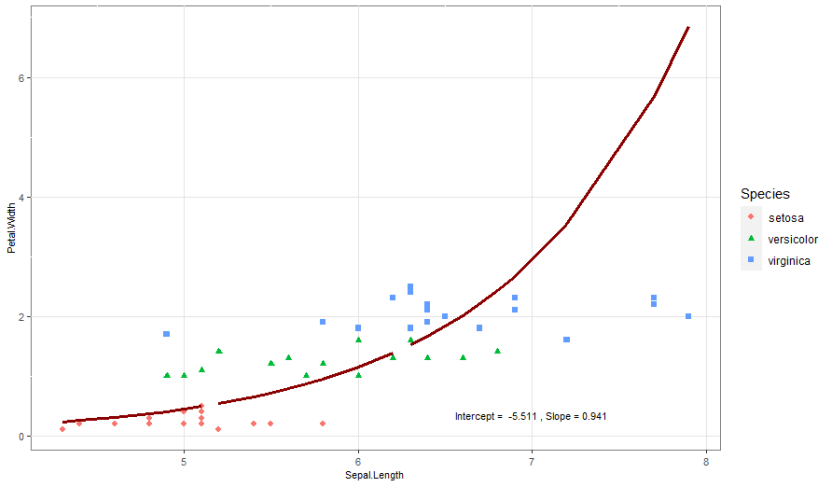
Sepal.Length x Petal.Width on Iris testing dataset



Gamma Regression

Scatterplot - Gamma Regression model

Sepal.Length x Petal.Width on Iris testing dataset



RMSE among models

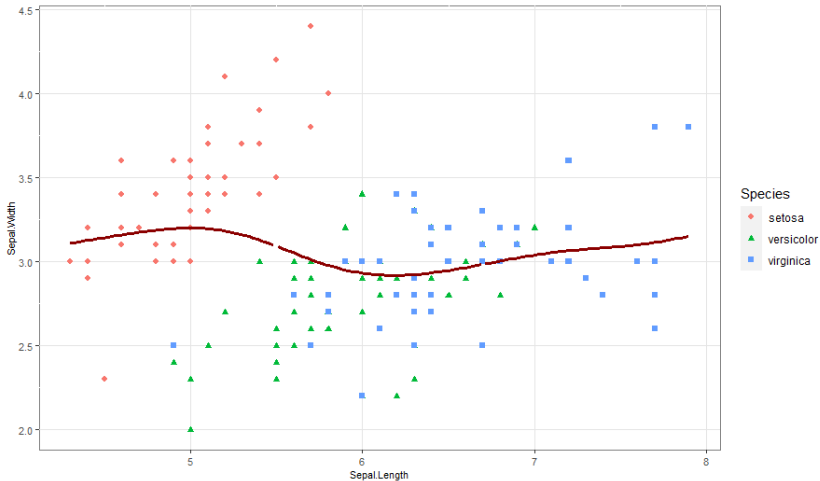
```
1 RMSE_lin <- sqrt(mean((testing$Petal.Width - testing$lr.model)^2))
2 RMSE_lol <- sqrt(mean((testing$Petal.Width - testing$log.lin.model)^2))
3 RMSE_poi <- sqrt(mean((testing$Petal.Width - testing$pois.model)^2))
4 RMSE_nbi <- sqrt(mean((testing$Petal.Width - testing$nb.model)^2))
5 RMSE_gam <- sqrt(mean((testing$Petal.Width - testing$gam.model)^2))
6
7 RMSE <- matrix(c(RMSE_lin, RMSE_lol, RMSE_poi, RMSE_nbi, RMSE_gam ), ncol = 5)
8 colnames(RMSE) <- c("Linear", "Log-Linear", "Poisson", "Negative Binomial", "
  Gamma")
9 rownames(RMSE) <- 'RMSE'
10 RMSE
```

	Linear	Log-Linear	Poisson	Negative Binomial	Gamma
RMSE	0.49	1.48	0.74	0.74	1.20

Nonparametric Kernel Regression

Scatterplot - Nonparametric Kernel regression model

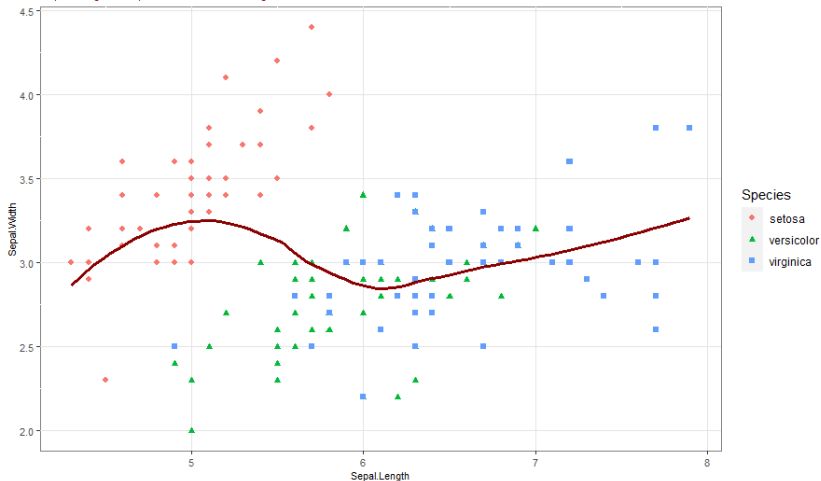
Sepal.Length x Sepal.Width on Iris testing dataset



Nonparametric Smoothing Splines Regression

Scatterplot - Nonparametric Smoothing Splines regression model

Sepal.Length x Sepal.Width on Iris testing dataset



References

The R Project for Statistical Computing:

<https://www.r-project.org/>