1. Linear Regression Analysis:

Regression analysis is a statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables when the focus is on the relationship between a dependent variable and one or more independent variables i.e. the predictors.

Please check the following table:

Multiple.R_Squared	Adjusted.R_Squared	F.Statistic	pvalue
0.938	0.937	734.389	0.000

The Adjusted R-squared value (93.7%) means the % of the total variability in "Petal.Width" that is explained by the independent variables used in the linear regression model.

The F-statistic is 734.389, and has a p-value equal to 0 ($p<0.05$). This means that the null hypothesis should be rejected and, consequently, the model is highly significant.

However, it is important to know, if all the studied variables significantly contribute to the linear regression model.

Please check the following table:

term	estimate	std.error	statistic	p.value
(Intercept)	-0.240	0.178	-1.347	0.180
Sepal.Length	-0.207	0.048	-4.363	0.000
Sepal.Width	0.223	0.049	4.553	0.000
Petal.Length	0.524	0.024	21.399	0.000

The table presents the estimation of each variable's coefficient. Looking at the p-values, it is possible to verify that variables Sepal.Length, Sepal.Width, Petal.Length are significant ($p<0.05$).

Additionally, variables with positive coefficient (see "estimate" column in the table) are directly related to an increase in the dependent variable values. Variables with negative coefficient are directly related to a decrease in the dependent variable values.