

STAT CRAFT



WEB-BASED SOLUTION

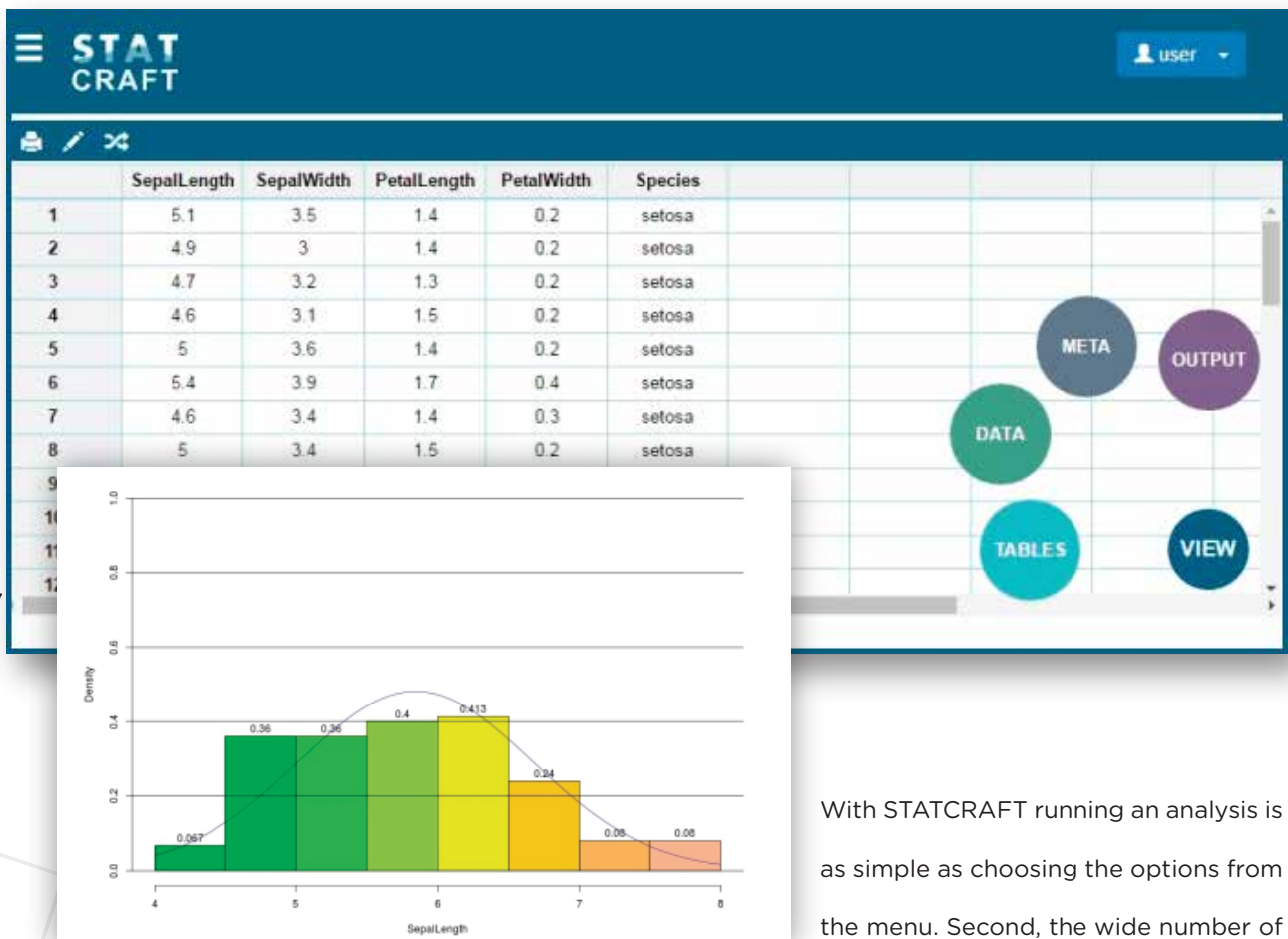
FOR STATISTICAL ANALYSIS WITH R
MINUS THE HASSLE OF CODING

What is STATCRAFT?

STATCRAFT is a browser based rich GUI that helps Data Scientists harness the power of R without having to write a single line of code. With STATCRAFT you can easily bring in and organize your data, access some of the most popular data

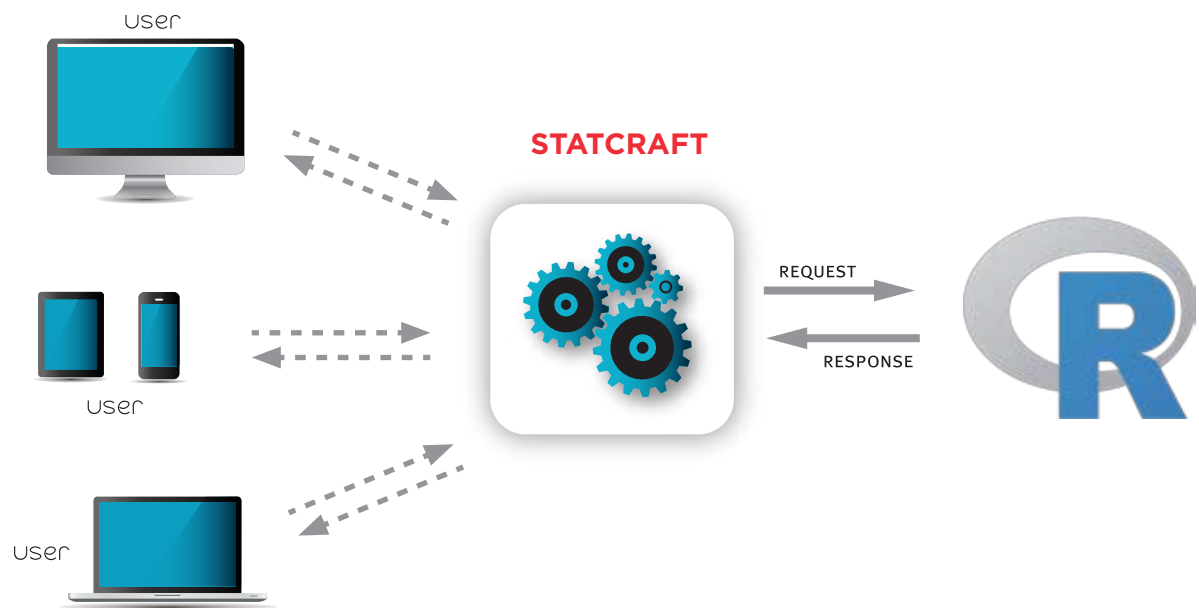
Why STATCRAFT ?

R is an extremely popular and powerful analytics software that is rapidly becoming the tool of choice for Data Scientists around the world. However, R does pose a few challenges. First, in R any analysis requires coding, consuming time and effort.



analysis techniques in R and view the results in elegantly formatted output tables. STATCRAFT makes it simple and easy to focus on analysis rather than programming.

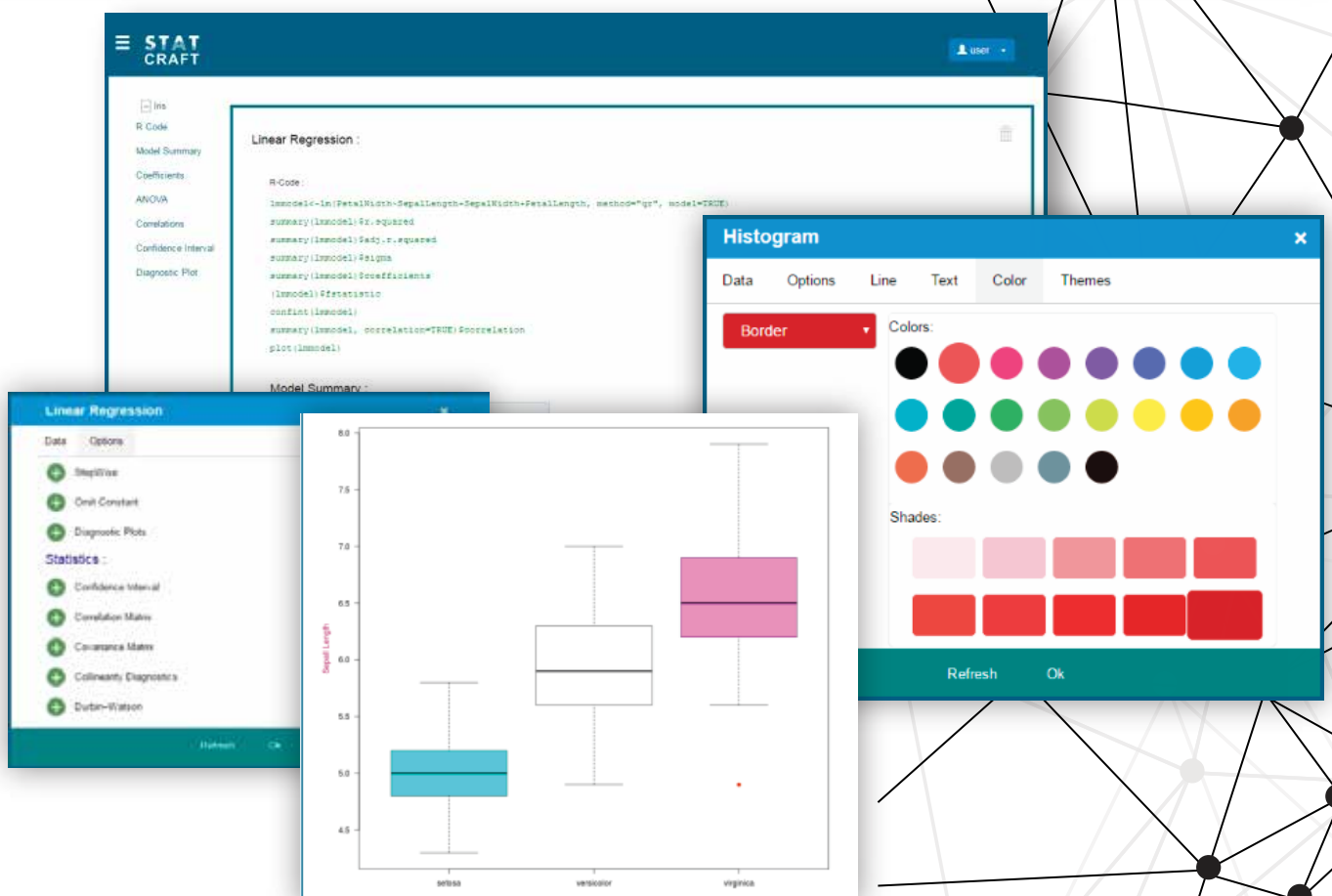
With STATCRAFT running an analysis is as simple as choosing the options from the menu. Second, the wide number of packages available in R can often require the user to comb through a large number of resources to identify the set of techniques that best suit the task at hand. STATCRAFT combines and groups all the related techniques together making it easy and quick to run end-to-end analyses. Last but not the least, STATCRAFT presents output from R as formatted tables that can straightaway be used in reports and publications.



The STATCRAFT Architecture

STATCRAFT runs on the organization's web server, allowing users to access R functions through their browsers. While the data stays secure on the server, the users have the comfort of working from the familiar environment of their PCs and devices.

The server based architecture eliminates the need for system administrators to manage multiple installations while making it easier to monitor usage and the organisations data resources from a single location.



SALIENT FEATURES

► Frequencies

► **Descriptives:** Count, Minimum, Maximum, Range, Mean, Sum, Standard Deviation, Variance, Standard Error of Mean, Coefficient of Variation, Kurtosis, Skewness.

► **Charts:** Bar Plot, Histogram, Scatter Plot, Pie Chart, Box Plot.

► **Crosstabs:** Count, Total, Row Proportion, Column Proportion, Table Proportion, Row Sum, Column Sum, Expected, Standardized Residuals, Adjusted Standardised Residuals, Residuals, Chi-Square Proportion, Chi-Square Statistics, Chi-Square Statistics Correlation, McNemar, Fisher.

► **t-Test:** One Sample t-Test, Independent Samples t-Test, Paired Sample t-Test.

► **Correlation:** Pearson, Spearman, Kendall, SPLOM

► **One Way ANOVA:** Holm, Hochberg, Hommel, Bonferroni, BH, BY, fdr, None, Tukey's HSD, Bartlett, Levene's test.

► **Two-Way ANOVA :** *

► **Linear Regression:**
Stepwise: Forward, Backward, Both.

Confidence Intervals, Correlation Matrix, Covariance Matrix, Dubin-Watson, VIF, Residuals vs fitted plot, Normal Q-Q plot, Scale Location plot, Cook's Distance plot, Residuals vs Leverage plot. Cook's distance vs Leverage.

► **Hierarchical Cluster Analysis:** Distance - Euclidean, Maximum, Manhattan, Canberra, Binary, Minkowski. Method - ward.D, ward.D2, Single, Complete, Average, Mcquitty, Median, Centroid.

► **K-Means Cluster Analysis:** Hartigan-Wong, Lloyd, Forgy, MacQueen.

► **Non Parametric Tests:** Kruskal-Wallis, Wilcoxon.

► **Binomial Logistic Regression:** Stepwise, ANOVA, Confidence Interval, Odds Ratio, covariance matrix, correlation matrix, Variable importance, Pseudo R square, Hosmer Lemeshow Goodness of fit, Likelihood Ratio Test, Wald Test, Classification Table, Classification Rate, ROC Curve.

► **Multinomial Logistic Regression:** Stepwise, ANOVA, Confidence Interval, Odds Ratio, Correlation Matrix, Variable Importance, Classification Table, Likelihood Ratio Test, Pseudo R2, Pearson chi-Square

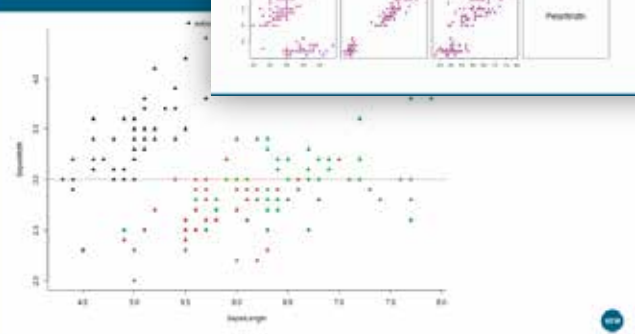
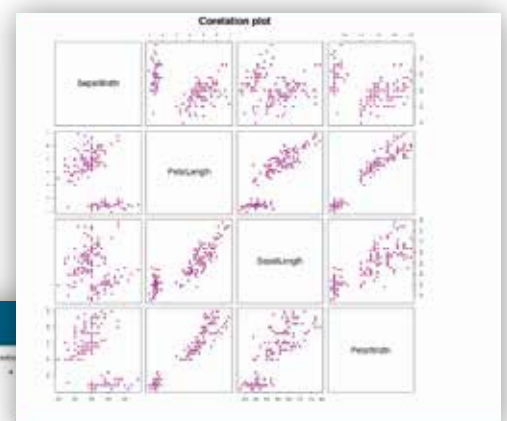
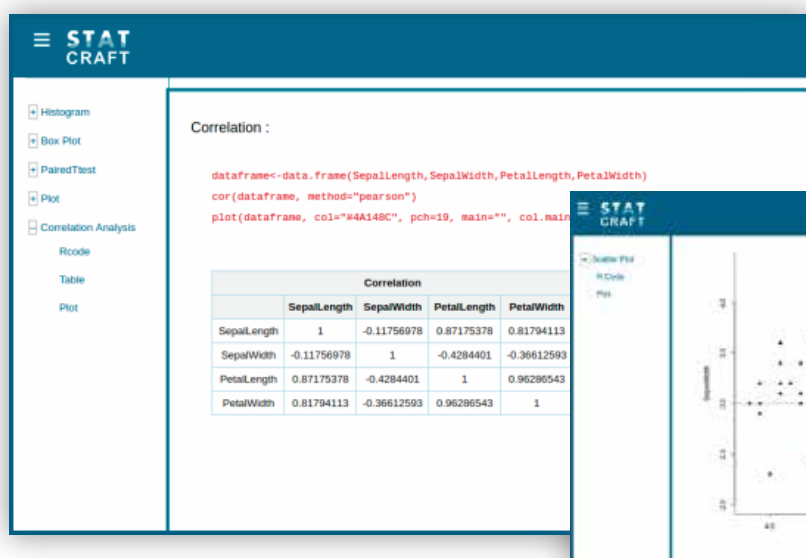
► **Time Series:** *

► **Factor Analysis:** eigenvalues, Correlations of factor score estimates, Weights, Rotation Matrix, path diagram, Scree Plot, parallel Analysis plot, Correlation plot.

► **Decision Tree:** *

► **Neural Network:** *

* Work in progress





SERVER REQUIREMENTS

► Hardware:

Processor: Xeon Quad core processor or equivalent

Memory: 8GB RAM or more.

Hard Disk: 600 GB or more.

► Software:

Operating System

Ubuntu Server 16.

Database

PostgreSQL 9.5

Web Server

Apache Tomcat 8.0.36

JRE 8.0

Others

R 3.3.2

► Browser:

Best viewed in Google Chrome

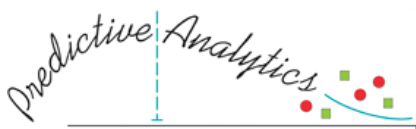
► Network:

TCP/IP protocol

Port 8080 to be opened

Note: Dedicated server with no shared web application running

+ STATCRAFT is currently in development and some of the above features may get omitted or changed in the final product.



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