## JMP<sup>®</sup> for Industrial & Systems Engineering

Engineers have data that needs to be analyzed, modeled, and understood. JMP<sup>\*</sup> statistical discovery software from SAS includes a full suite of capabilities that helps engineers to visualize data, explore patterns, optimize experimental designs, evaluate results, improve reliability of product or system, and build robust processes - all in an easy to use, visual and interactive way.



# Data Visualization & Exploration

Explore data dynamically using a variety of charts, graphs, plots, and maps to uncover insights. Move effortlessly (point & click) from data discovery to report sharing.



#### Predictive Modeling & Machine Learning (ML)

Analyse and Predict using Advanced Regression & Classification methods. Explore various ML algorithms to build, validate, compare, select, and deploy statistical models.



## Statistical Process Control & Six Sigma

Investigate Quality problems using control charts, Measurement System Analysis (MSA), Process Screening, Pareto & Root cause analysis and solve using DMAIC six sigma tools.



**Engineering Statistics** 

Perform descriptive and inferential statistics using ANOVA & Regression. Fit and validate Probability distributions, Tolerance & Prediction Intervals, Bootstrapping and Randomization.



#### Design of Experiments (DOE)

Explore Classical, Screening, Response Surface, Definitive Screening, Mixture and Taguchi designs. Use Custom Design to construct tailor made optimal design for your experimental setting.



Robust Process Optimization Use Prediction profiler to find best process conditions that maximizes desirability. Perform Monte Carlo Simulation and Simulation experiment to derive a robust solution.



Multivariate Analysis

Apply multivariate methods like Principal Component Analysis (PCA), Factor Analysis, Clustering, Discriminant, Partial Least Square (PLS), Multidimensional Scaling (MDS) and Structural Equation Models (SEM).



#### **Reliability & Survival**

Apply tools and methods to evaluate and improve reliability in a product or system and analyze survival data for products. Build models for time-to-event response data.



# Time Series Analysis & Forecasting

Explore Time series data to build ARIMA, Seasonal ARIMA and Transfer function models. Forecast using an automated model selection algorithm and fit the best model.



### Customer Success Stories

JMP is a tool of choice for engineers, scientists and other data explorers. Leading universities and research institutions across the globe use JMP for teaching and research. Please browse through our customer success stories at jmp.com/success.

#### Bridgestone

In just six months, engineers developed an exciting new tire prototype using analytical methods for mixture formulation using JMP\*. Bridgestone's engineers have created efficiencies in product development by designing more functional experiments for complex data sets in JMP. New products now in testing score more highly on traction, longevity, fuel efficiency and robustness.

#### Eastman

Statisticians at Eastman say JMP<sup>\*</sup> Pro is their "Swiss army knife." JMP allows them to interactively engage with their data and to share insights more easily with their customers. "We're seeing so many successes across the board with JMP. It's such an essential tool for us," says Howard Rauch of Eastman's Applied Statistics group.

#### P&G

P&G has embraced a culture of continuous improvement that runs on JMP\*. P&G has adopted a culture of analytics throughout the organization, taking a data-centric approach to experimentation with design of experiments capabilities in JMP to improve quality while also cutting costs. "Our goal is to use a quantitative approach to develop superior products," says statistician Beatrice Blum.

#### NXP

With JMP, engineers have transformed methods for solution design, manufacturing, and process improvement. "it's simply no longer possible to do our work without JMP Pro" says Corinne Berges, PhD, who leads risk assessment, statistical and safety analysis for NXP's Advanced Automotive Analog Development and manages six sigma training across Europe, Middle East and Africa.

### JMP for Industrial and Systems Engineering



#### JMP : jmp.com/jmp

- Data visualization and EDA
- Quality and Reliability
- Statistical Analysis and Modeling Design of Experiments (DOE)



#### JMP Pro : jmp.com/pro

- Predictive Modeling and Cross Validation
- Mixed Models and FDA
- Model Screening, Comparison and Deployment
- Text Mining and Sentiment Analysis

### Free JMP trial

JMP is available on both MAC and Windows. Start your 30-day free trial today by visiting **jmp.com/try**.

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