Virtual No-Code Data Science Certification Training
>> Class Registration is now Open <<

All Roads Lead to Machine Learning and AI

What path are you on?

No-Code Data Science Academy

ONLINE ACADEMY

Co-Founders and Faculty:
David Patrishkoff MS LSSMBB
Robert E Hoyt MD FACP FAMIA

Register at: www.nocodedatascience.net   > Certification tab

Contact DavidJohnPatrishkoff@gmail.com for more information

High-End No-Code Data Science (ML/AI) is Possible

NO CODE DATA SCIENCE

Mastering Advanced Analytics, Machine Learning, and Artificial Intelligence
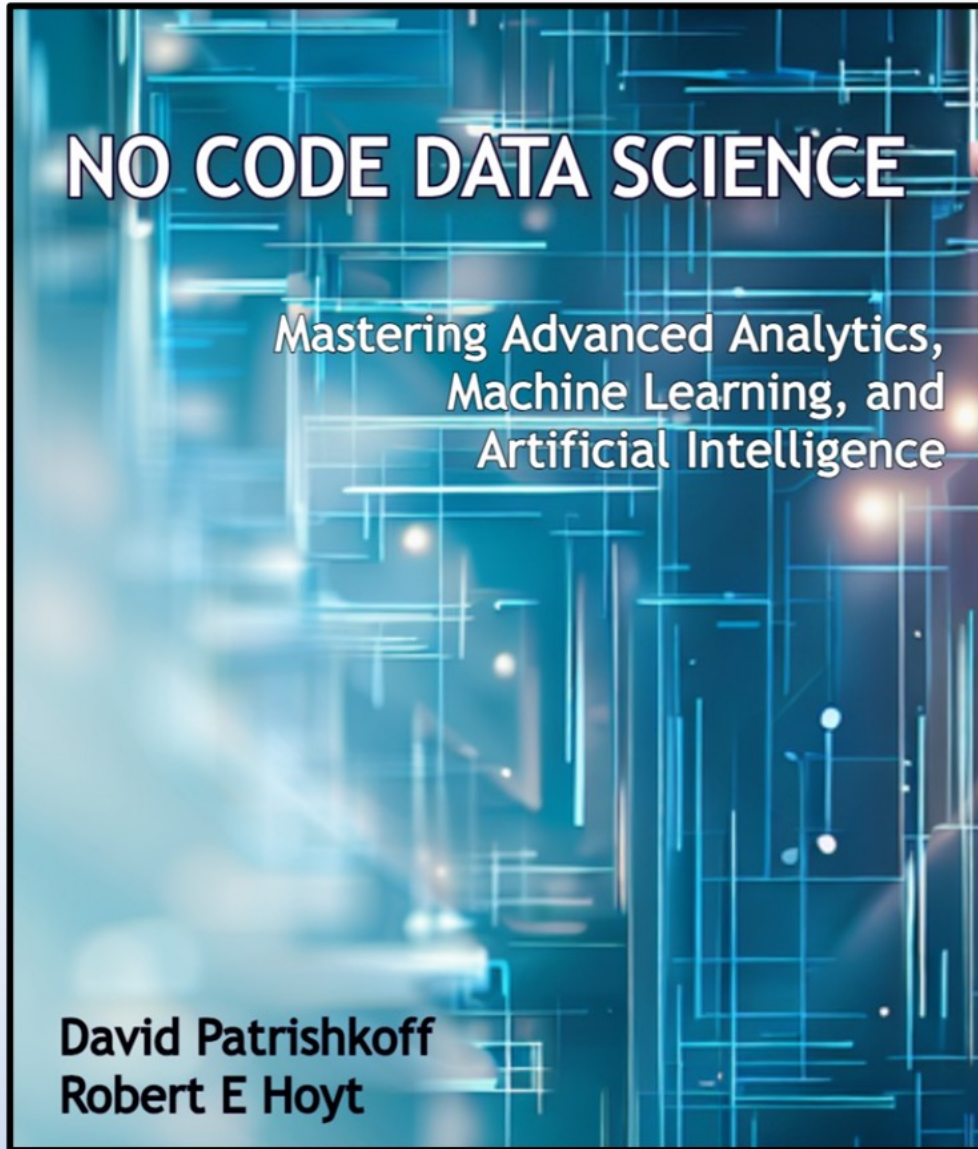
David Patrishkoff
Robert E Hoyt

Our training will be based on our new textbook published in October 2023

- **Level 1 Fundamentals Cert Class (8 weeks)**: no projects
- **Level 2 Practitioner Cert Class (12 weeks)**: 8 projects
- **Level 3 Advanced Practitioner Cert Class (12 weeks)**: 12 projects

2024 Training and Certification Schedule

- **2024 Training for Level 1 Certification (8 weeks)**: 1/12/2024 to 3/1/2024: All classes start at 6:00 PM EST on Fridays

- **2024 Training for Level 2 & 3 Certification (12 weeks)**: 1/13/2024 to 3/30/2024. All classes start at 11:00 AM EST on Saturdays

- **A weekly Office hour** at 6PM EST on Mondays to answer questions

Additional training events to be published in early 2024

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High-Performance No-Code Predictive Analytics (ML/AI) is Possible

Our Level 2 and 3 project-based certification class students will use our **private Kaggle data competitions** to fine-tune their skills and learn what it takes to compete against the best data scientists in the world …. with no-code tools

Our students will be trained in free open-source Software such as Orange, JASP, and BlueSky Statistics

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No-Code Data Science Learning Goals for our Level 2 and 3 Classes

1. Conduct Data preparation and wrangling

2. Construct compelling data visualizations

3. Develop and evaluate predictive models

4. Conduct Time Series forecasts and survival analysis

5. Conducting Geolocation-based analysis

6. Implement Image Analytics Techniques

7. Master Text Mining Strategies

8. Explore the future of Continuous Improvement (CI) and Innovation on Demand (IOD) Techniques

9. Learn Super-Prompts to drive high-performance outputs from AI Chatbots to accelerate problem-solving an Innovation efforts
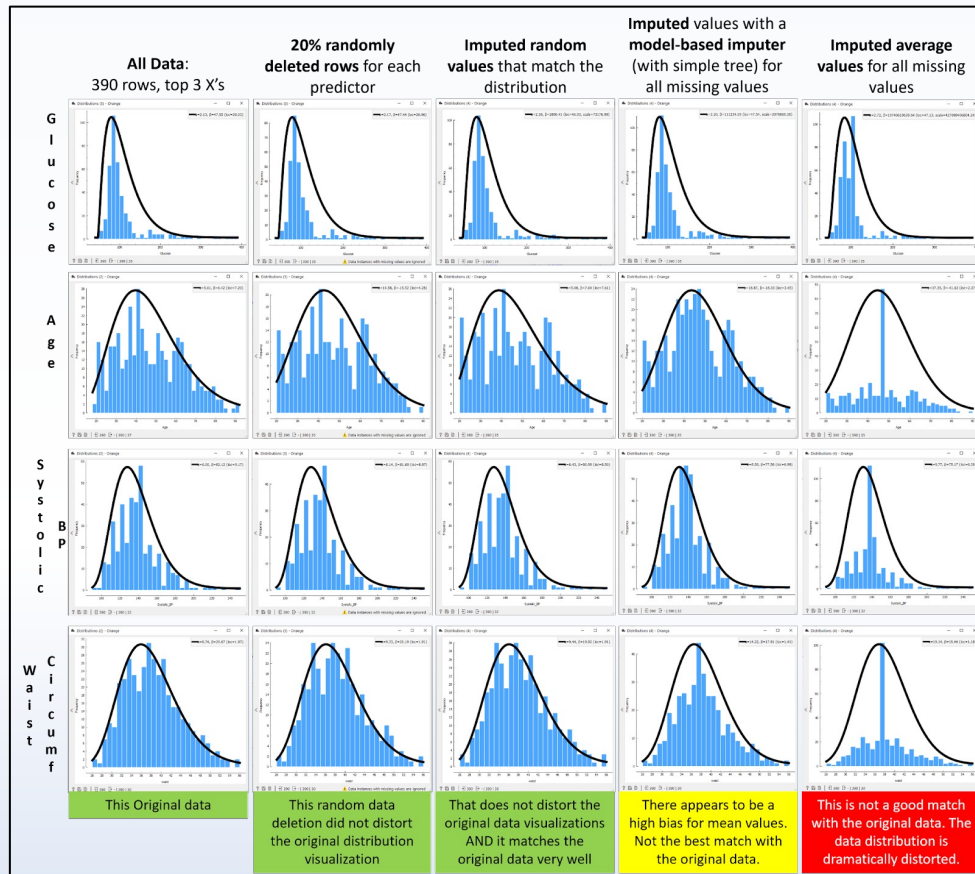
1. Data Preparation and Wrangling

Reshaping Chaos into Clarity: Polishing and Prepping Data for Predictive Modeling
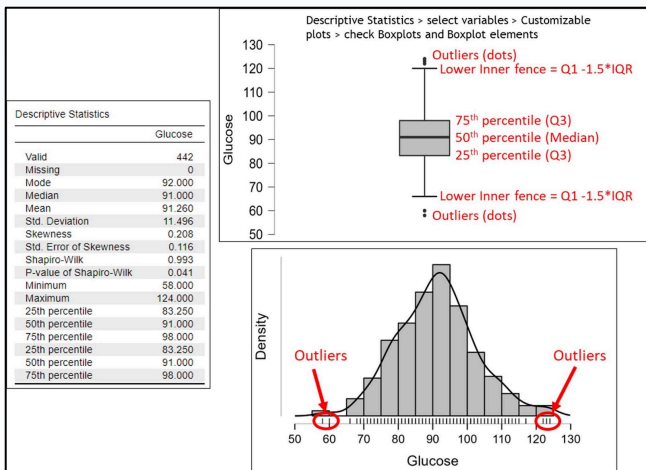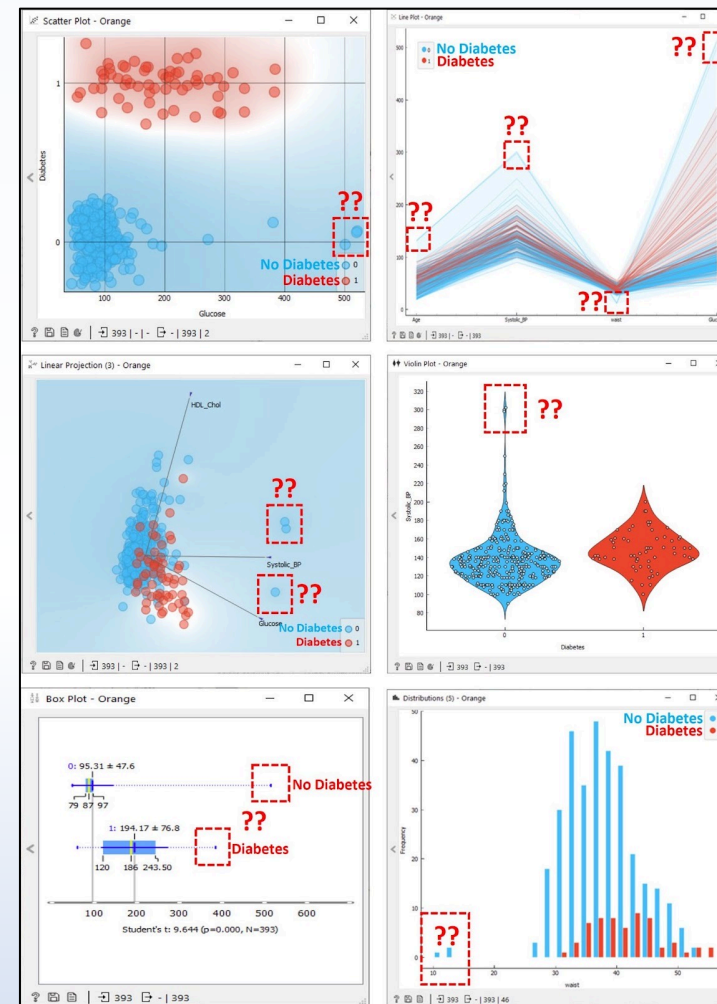

JASP Outlier analysis
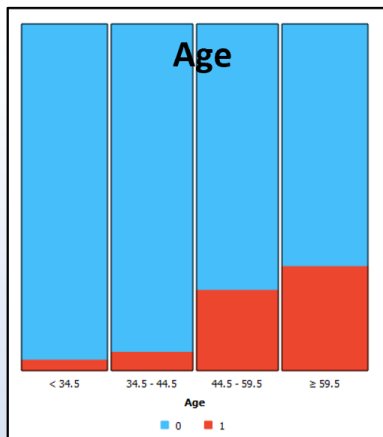
Orange data binning

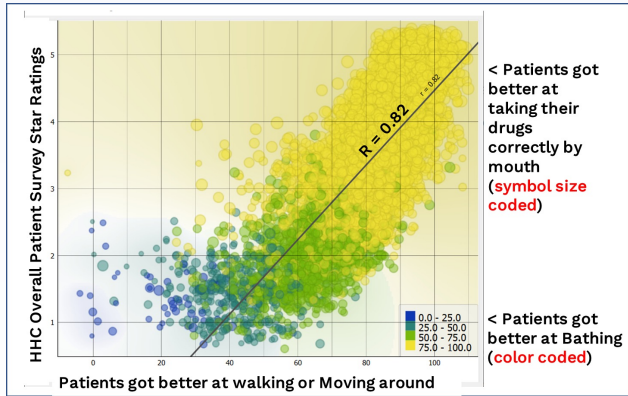Orange Missing Data Imputation experiments
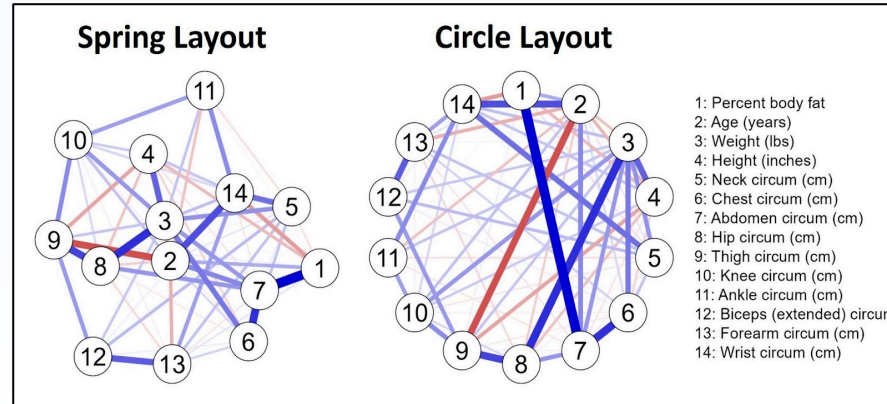
Orange data entry error identification

Orange, BlueSky, and JASP offers a wide variety of data prep and wrangling techniques

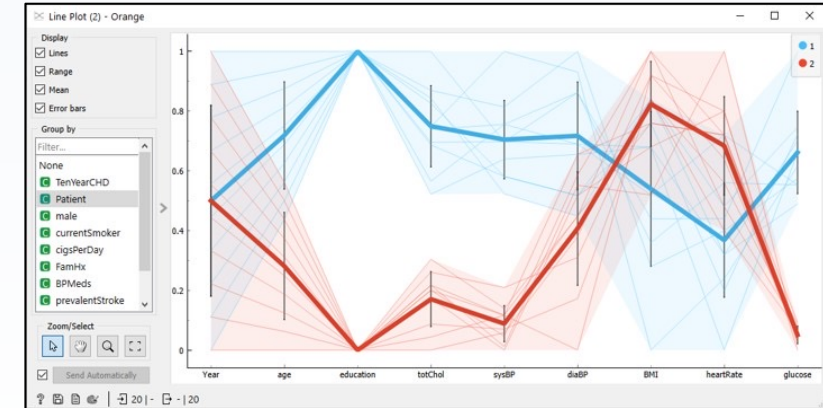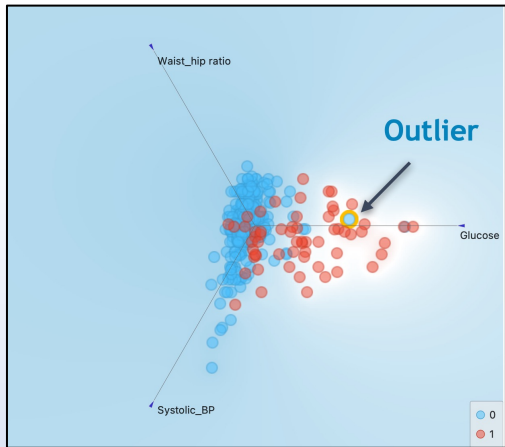# 2. Constructing Compelling Data Visualizations

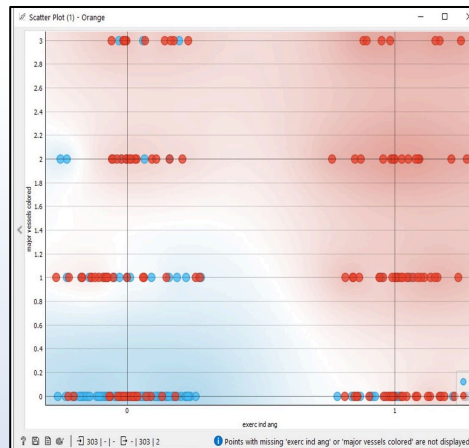*Painting Stories with Numbers*

Orange Scatter Plot
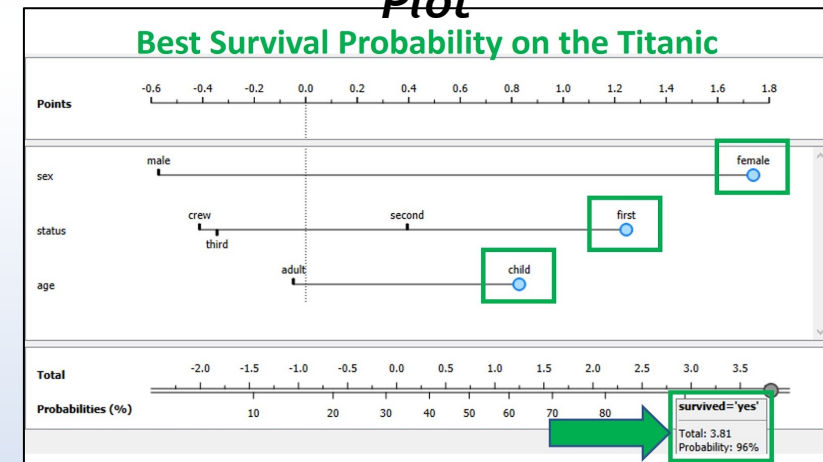

JASP Network / Correlation plots

Orange Parallel Coordinates Plot

Orange 3D plot

Orange Scatter Plot

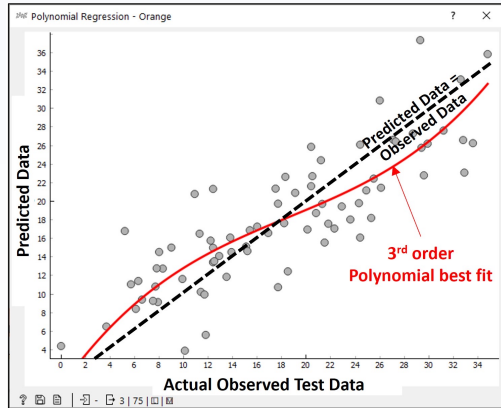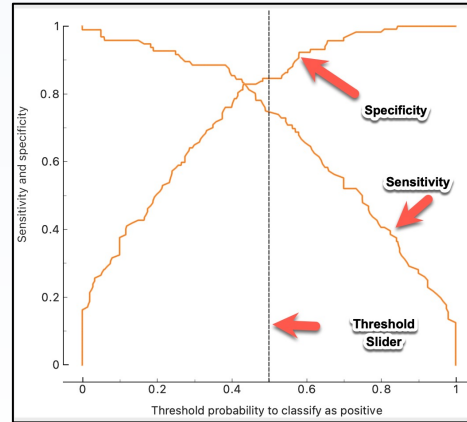**Orange Nomogram**

Orange, JASP, and BlueSky Statistics offers a wide variety of data visualizations
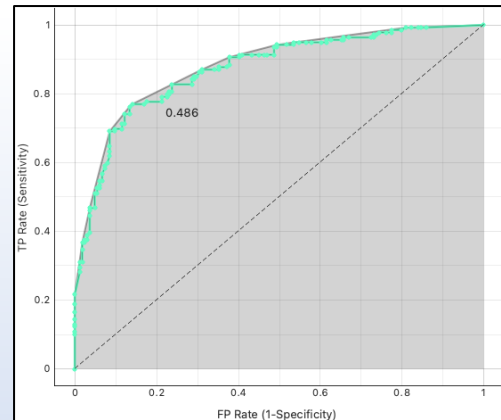
3. Developing and Evaluating Predictive Models

Forging Future Insights: Crafting and Calibrating Predictive Models

Orange Model Residuals analysis

Orange Sensitivity vs Specificity plot with Threshold slider

Orange ROC Curve
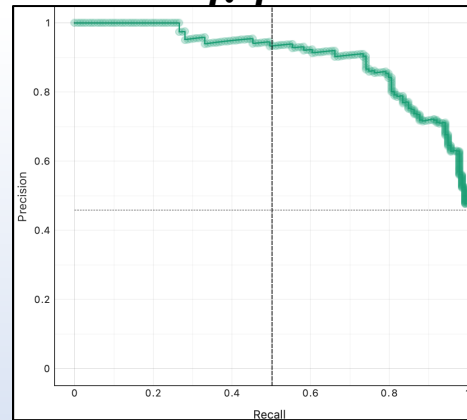
Orange Precision-recall Curve

Only 80% were predicted positive, but almost 100% of them were indeed positive

Predicting too many false negatives

Predicting too many false positives

Perfect prediction

40% were predicted positive, but only 20% of them were indeed positive
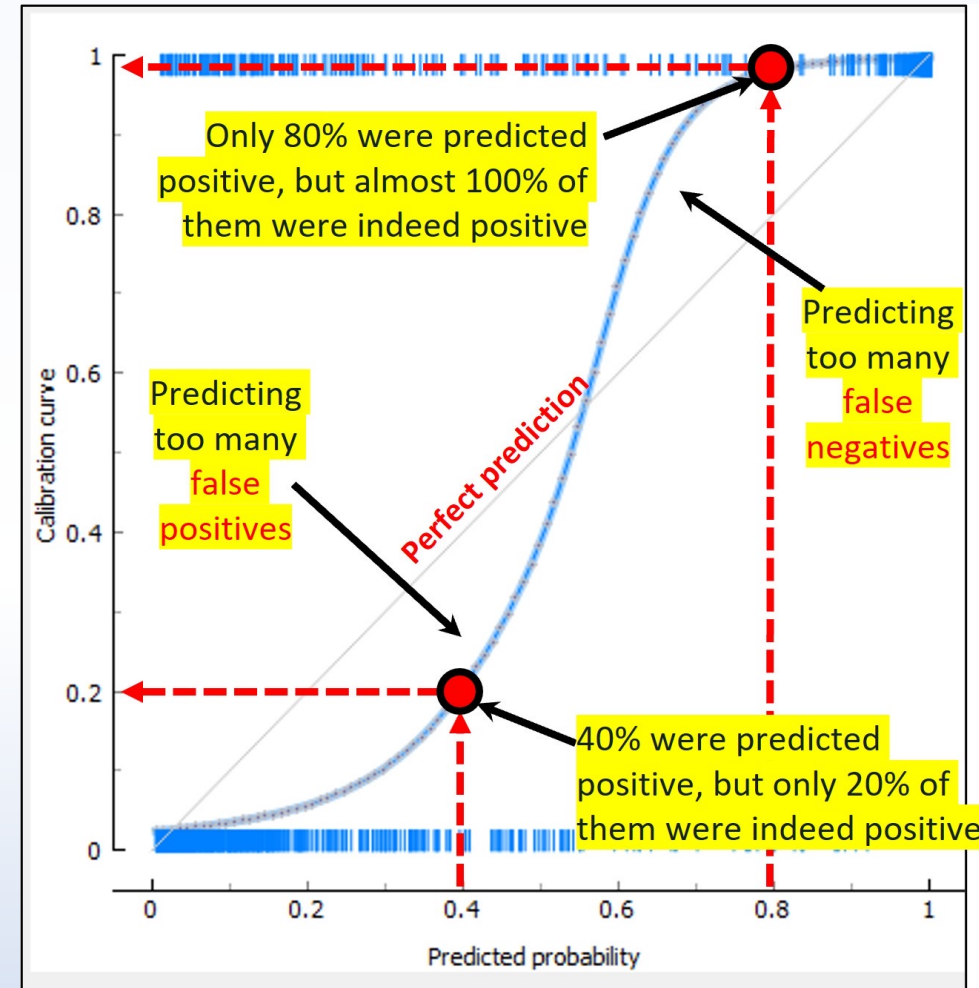
Orange model Calibration Curve

Orange, BlueSky, and JASP offers a wide range of model building and evaluation methods

4. Conducting Time Series Forecast and Survival Analysis

Unraveling Time's Tapestry: Mastering Forecasts and Lifelines with Analysis

Recurrence times for breast cancer
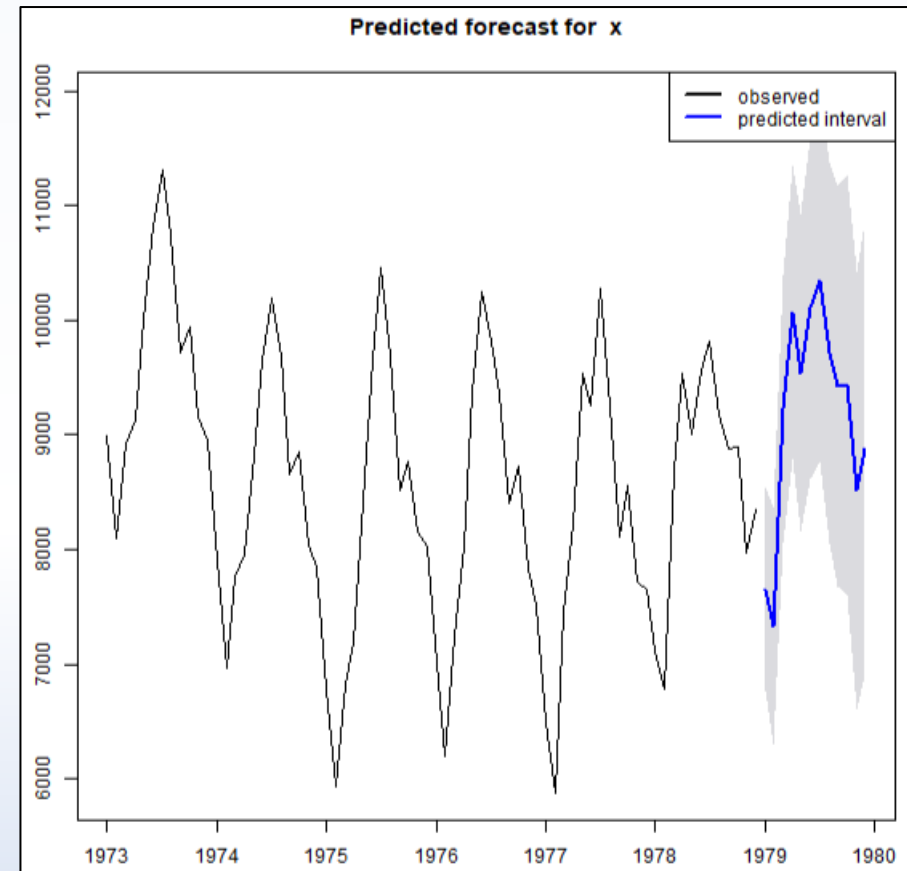
Orange and BlueSky offers Time Series Forecasting and Survival Analysis techniques
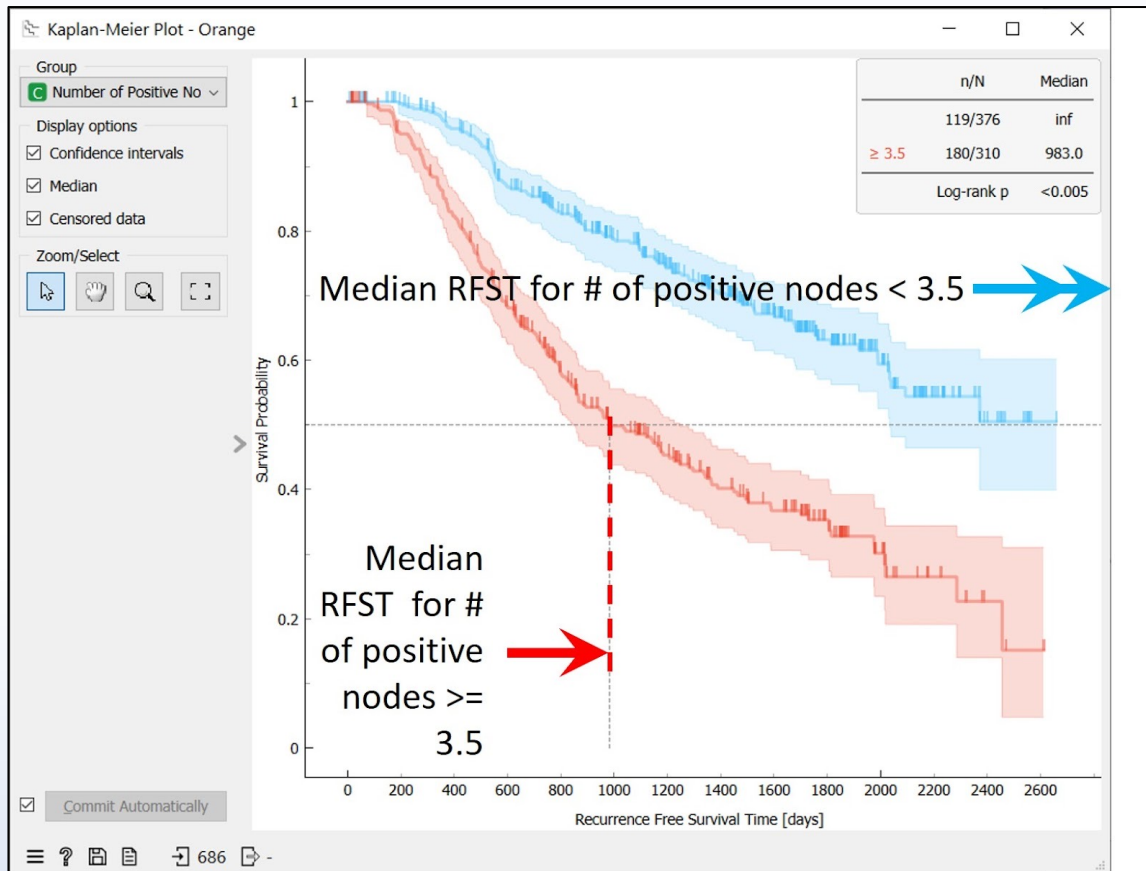
5. Conducting Geolocation-based Analysis

Merging Art, Geography, and Analytics
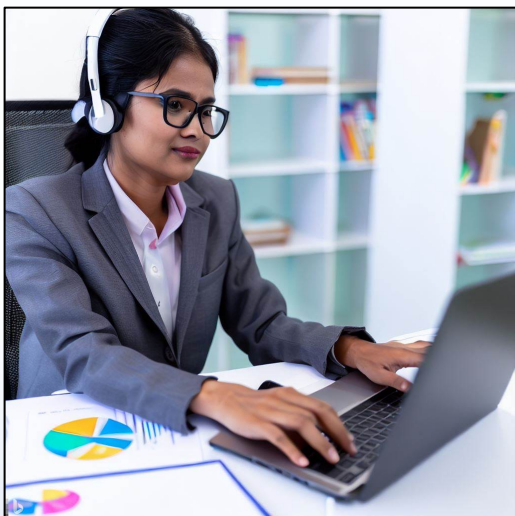
Analytical
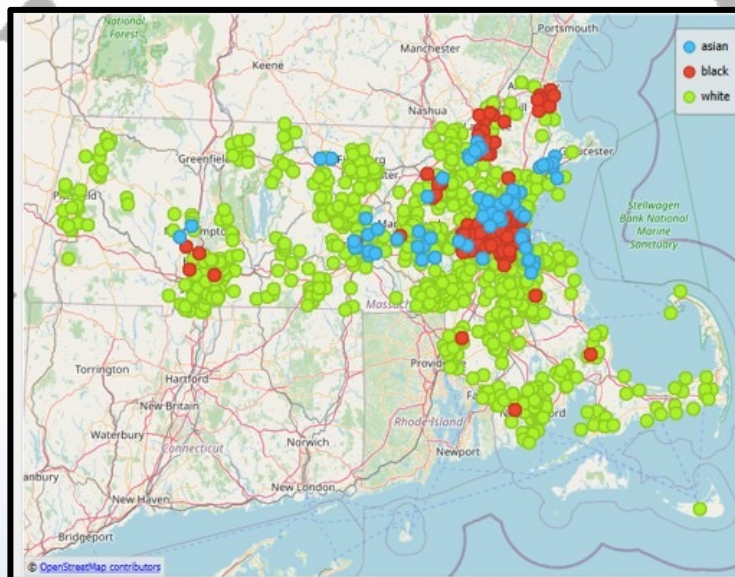
Geospatial
Visualizations

Creative

AI Images created by DALL-E

Orange and BlueSky offers Geo-Spatial Analysis techniques

6. Implementing Image Analytics Techniques

Picturing the Future: Predictive Insights with Image Analytics

Xray diagnoses

ECG diagnosis

Mood detection

AI Images created by DALL-E

Facial recognition

Posture / gait classification

Orange can provide a wide range of image detection, classification, and predictive analytics

7. Mastering Text Mining Strategies

From Words to Wisdom: Master the Art of Text Mining for Deep Insights

Orange Word Cloud

Orange Text clustering and Sentiment Analysis

Orange offers a variety of Text mining tools ranging from simple Word Clouds to Text Clustering, Sentiment Analysis, and Text Grouping Predictions

8. Exploring the Future of Continuous Improvement (CI) Methodologies

Revolutionizing Efficiency: Disruptively Reinventing Lean Six Sigma and other CI Methodologies with ML/AI

R-Squared for the Regression surface: 94.9%
Care Compare data from 7831 of 11,646 HHC Providers

HHC Quality of Patient Care Star Rating
% that got better at Bathing
% that Improved at Moving & Walking around

Cascading SWOT Analysis

LEADERSHIP
CULTURE
PROCESS
PERFORMANCE
RESPONSE
FEEDBACK LOOPS

Strengths | Weaknesses
Opportunities | Threats

Orange Feature importance results for a classification problem

major vessels colored
chest pain
thal
gender
slope peak exc ST
max HR
rest SBP
ST by exercise
exerc ind ang
rest ECG

Decrease in AUC

LSS Brainstorming to identify Projects to Reduce Manufacturing Waste

1.Defects, scrap, repair, redoing, fixing, mistakes, other errors in a process, missing or incorrect info, Internal / external customer complaints or missed deadlines

2. Non-optimal Processes and NVA: work, steps or resources used to perform a task that a customer sees no value in. Low capacity or capability, poor communications, lack of training / cross-training, too much done in series, not in parallel, redo loops are present, staff shortages, lack of innovation

3. Over-processing or over-production: doing more than the customer requests, maybe you do not know what they really wants, over killing specs, too many redundant quality checks required that a customer would not directly want to pay for.

4. NVA Transportation, movement or loops (actual or virtual) of material, products, inventory, products, paperwork or information

5. High Inventories of raw material, WIP and / or finished goods, safety stock. Kanban not widely used; JIT delivery not implemented.

6. Waiting: slow upstream process, bottleneck, bureaucracy, equipment, machine or downtime, changeover times, redo loops, too many adjustments, material not available, actions not done, non-synchronized hand offs, confusing and complex processes, non-motivated staff, high maintenance processes, overburdened staff, can't get a win-win situation, slow development times, non-balanced cycle times, decisions not made, too long between the end of any process and the start of a new process step start

Expanded Root Cause Brainstorming

WASTE

7. Material Flow inefficiencies along the main flow of process steps for products being manufactured

8. Non-competitive Supply Chain: High cost, low capability and too many suppliers with ineffective audits in place, not challenging & / or monitoring suppliers in their pursuits of effective productivity improvement & cost reduction initiatives

9. Inefficient Purchasing methods: Not using economics-of-scale, no back-up plans, use of cheaper substitute materials with the same quality, consolidated purchases, e-business and e-bidding, etc

10. Needless Motion of people, vehicles, equipment that should be observed and spaghetti charted noting the distance traveled for each step and the total distance traveled.

11. New Technology not applied to: achieve error-proofing, high first time yields, process parameter data, automatic defect tracking for root cause analysis purposes, get higher output manufacturing processes, achieve cost reductions, quality checks

12. Variable and/or Fixed Costs are too high for: labor, rent, borrowing interest rates, material, utilities (water, electric power, steam, etc.), contracted services, raw material, depreciation, benefits, group medical plans, travel expenses, etc.

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The future of CI will focus on:
- Realtime and automated data analysis at the Gemba
- Expanded cascading root cause analysis
- Rapid continuous improvement
- Organizational cultural risk identification and mitigation
- AI chatbot support for all problem brainstorming activities
- Integrated Predictive Analytics
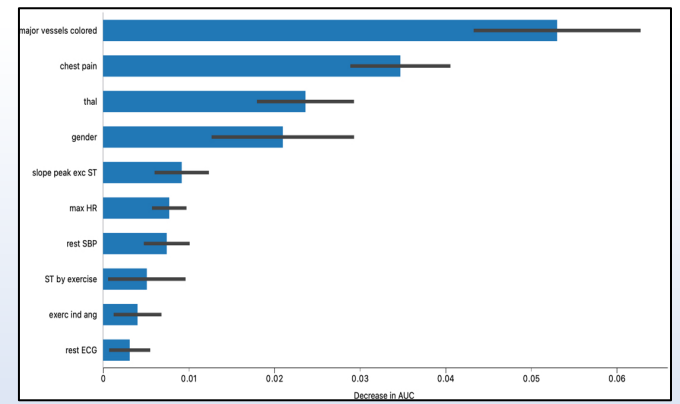- ChatPDF access to improved processes and procedures

BlueSky Statistics covers every standard and advanced Six Sigma Data Analysis Technique

9. AI Chatbots can Dramatically Augment the Performance of Clinicians, Professionals and Continuous Improvement Projects

Conclusion

We hope to see you in one of our upcoming virtual classes

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