ANALYTICAL SOFTWARE FEATURES

**Data Import and Export**

* **Data Import:**
  + CSV, Excel, Text files
  + Database connections (SQL, NoSQL, ODBC)
  + JSON, XML
  + Data from APIs
  + Direct connections to data warehouses and big data platforms (e.g., Hadoop, Spark)
* **Data Export:**
  + CSV, Excel, PDF, HTML
  + Database export (SQL, NoSQL)
  + Direct export to data visualization tools (e.g., Tableau)

**Data Management**

* **Data Cleaning:**
  + Missing value imputation
  + Duplicate removal
  + Data transformation (scaling, normalization)
  + Data validation
* **Data Manipulation:**
  + Filtering and subsetting
  + Merging and joining datasets
  + Data reshaping (pivoting, unpivoting)
  + Calculated fields and custom formulas

**Statistical Analysis**

* **Descriptive Statistics:**
  + Mean, median, mode
  + Standard deviation, variance
  + Percentiles and quartiles
  + Frequency distributions
* **Inferential Statistics:**
  + T-tests, Chi-square tests
  + ANOVA, MANOVA
  + Regression analysis (linear, logistic)
  + Multivariate analysis (PCA, factor analysis)
* **Advanced Analytics:**
  + Time series analysis and forecasting
  + Survival analysis
  + Non-parametric methods
  + Bayesian statistics

**Data Visualization**

* **Basic Charts:**
  + Histograms, bar charts, line charts
  + Scatter plots, box plots, heat maps
* **Advanced Visualizations:**
  + Multidimensional scaling plots
  + Interactive dashboards
  + Geo-spatial visualizations
  + Network graphs
* **Custom Visualizations:**
  + Custom scripting for bespoke plots (e.g., using Python or R)
  + Integration with visualization libraries (e.g., D3.js)

**Predictive Modeling**

* **Machine Learning:**
  + Classification algorithms (SVM, Random Forest, KNN)
  + Regression algorithms (Lasso, Ridge, Decision Trees)
  + Clustering algorithms (K-means, Hierarchical)
  + Neural networks and deep learning
* **Model Evaluation:**
  + Cross-validation
  + ROC curves and AUC
  + Confusion matrix
  + Model interpretability (feature importance, SHAP values)

**Automation and Scripting**

* **Scripting Languages:**
  + Integration with R, Python, and other scripting languages
  + Built-in scripting (e.g., JMP Scripting Language - JSL)
* **Automation:**
  + Macro recording and playback
  + Scheduled tasks and automated workflows
  + API for programmatic access and automation

**User Interface and Usability**

* **User Interface:**
  + Intuitive drag-and-drop interface
  + Customizable dashboards and reports
  + Context-sensitive help and tutorials
* **Collaboration:**
  + Shared workspaces and projects
  + Version control integration
  + Real-time collaboration features

**Advanced Features**

* **Big Data Analytics:**
  + Distributed computing support
  + Integration with big data tools (e.g., Hadoop, Spark)
* **Text Analytics:**
  + Text mining and natural language processing
  + Sentiment analysis
  + Topic modeling
* **Simulation and Optimization:**
  + Monte Carlo simulation
  + Optimization techniques (linear programming, genetic algorithms)

**Security and Compliance**

* **Security:**
  + User authentication and authorization
  + Data encryption in transit and at rest
* **Compliance:**
  + Compliance with data protection regulations (e.g., GDPR, HIPAA)
  + Audit trails and logging

**Connectivity and Integration**

* **APIs and Integrations:**
  + RESTful API for external integrations
  + Webhooks for event-driven integrations
  + Integration with cloud storage services (e.g., AWS S3, Google Cloud Storage)

This list provides a foundation for the features to consider when developing your analytical software. You can further enhance and specialize these features based on specific user needs and industry requirements.