DataRobot
Release 6.1

What’s New?

June 2020
DataRobot 6.1 **Headline Features**

- **Location AI**
  Add geospatial context to models

- **Anomaly Detection**
  Abnormal behavior in time series data

- **AI Value Tracker**
  Understand use cases and ROI

- **Profit Curves and Payoff Matrices**
  Know the value of every prediction

- **Enhanced Explainability and Trust**
  SHAP explanations, PII detector and Humble AI

- **MLOps Challenger Models**
  Compare models and update with confidence
DataRobot Location AI. Where Predictions Count

Upload your geospatial data in a variety of file formats and well known types

Combine location with numeric, categorical, date, text, and image feature types

Automates specialized spatial feature engineering on your location data

Visualize model accuracy over space to explain where your predictions work best

Add the Power of Spatial Awareness to Your Machine Learning Models
MLOps Challenger Models. **When Production Models Compete**

- Challenge your production models with alternative models to see who wins
- Replay production data on the challengers and visually compare to the current champion
- Use AutoML to quickly build high-quality challengers or leverage custom built models
- Compare models over time based on prediction results, accuracy and data errors
- Hot-swap your champion with a challenger within a tightly governed approval workflow

**Perform Same Rigor of Analysis on Your Production Models as You Do During Training**
Explainability and Trust. It's Not Hard to be Humble

**Humble AI**

Configure Humble AI rules in MLOps to trigger actions when uncertain predictions occur.

*E.g. Override prediction to 'loan is bad' if loan amount is greater than $100,000.*

**Data Quality Assessment**

New automatic data quality assessments surface issues such as missing values, outliers, target leakage and more.

**SHAP Explanations**

New SHAP-supported blueprints, SHAP-based feature impact and prediction explanations to see how much each feature is responsible for abnormal predictions.
Use Case Value Tracker. **Understand the ROI of Your AI**

A central hub for visibility into **all your AI use cases** across the enterprise.

**Organize and align** your DataRobot assets holistically around business use cases

Understand the **value of your machine learning projects** at every step from ideation to impact.

**Share, comment and collaborate** with team members on your use cases

**Justify the Business Value of Your Machine Learning Initiatives**
Time Series Anomaly Detection. Expect the Unexpected

New unsupervised ML workflow to detect, and investigate anomalies in your data.

Autopilot will select, train and compare a diverse set of anomaly detection models.

Uses unsupervised feature reduction to eliminate noisy data and focus on signal.

Unique Anomaly Over Time visualization displays probability of anomaly and when it occurred.

Easily deploy to an API endpoint to detect anomalies on new data as soon as they happen.

Take Preventive Action as Soon as Exceptional Behaviour Occurs
The figure shows the flow diagram of the manufacturing process with five major units, i.e. reactor, condenser, compressor, separator and stripper.

The process has two products from four reactants. Additionally, an inert and a by-product are also present making a total of 8 components denoted as A, B, C, D, E, F, G and H.
Anomaly Detection is a Complex Problem Space

Many different ways anomalies can appear over time
Synthetic AUC

Validation Sample + Anomalous Values

Validation Sample + Normal Values

Combined Synthetic Sample with Labels

Duplicate

Estimate ROC AUC based on artificial labels
Profit Curve & Payoff Matrix. **Know the Value of Every Prediction**

See the payoff from good predictions and the costs associated with bad predictions.

Configure multiple payoff matrices, inspect the profit curves and compare alternatives.

Set different display thresholds to see impact of -ve and +ve predictions in the confusion matrix.

Compare profit curves from different models and pick the most lucrative.

Optimize For Business Impact Not Just Accuracy
DataRobot Release 6.1 | Feature Details

**Time Series**
- Thresholded ZI models GA
- Date Durations Generation for OTV GA
- Calendars in the AI Catalog GA
- Expand FDWs to capture intra-month seasonality GA
- LSTM in repository, no feature flag GA
- Velocity and acceleration extractors GA
- AutoTS Anomaly Detection Unsupervised mode on by default GA
- AutoTS Anomaly Detection API made public GA
- Unsupervised mode feature reduction GA
- Batch Prediction support for Anomaly Detection models GA
- Anomaly Over Time improvements GA
- Anomaly Assessment Insight PUBLIC BETA
- Multiseries Support and Validation for CodeGen PUBLIC BETA
- Multistage OTV PUBLIC BETA
- 10GB OTV PUBLIC BETA
- Eureqa improvements GA
- Configurable model parallelization (Customizable FD worker/model splits) GA
- Autopilot Quick Run PUBLIC BETA
- Forecast vs Actuals plot PUBLIC BETA
- Data Quality GA

**Platform**
- Hadoop and LDAP Config Via GUI GA
- Location of cacerts embedded into parcel is configurable (Hadoop) PUBLIC BETA

**Explainable AI**
- SHAP Autopilot Mode GA
- SHAP Prediction Explanations GA
- SHAP Feature Impact GA
- Feature Impact Sample Size GA
- Data Quality Assessment GA
- Data Quality Handling Report GA

**MLOps**
- Challenger Model Analysis GA
- Github & S3 Integration GA
- Governance Lens GA
- Predictions Changes for Pricing 4.0 GA
- Monitoring Agent Enhancements Including Spark GA
- Custom Model Usability Enhancements GA

**Data Preparation**
- Spark SQL Code Prep GA
- Paxata - Range Joins GA
- Paxata - Predict Tool Improvements GA
- Paxata - Bulk Operations GA
- Paxata - Project Documentation GA
DataRobot Release 6.1 | Feature Details

Platform Features
- Notification Policy Management (GA)
- Integration with LDAP for Groups (GA)
- Enforce Organization Limits (GA)
- Organization Administrator (GA)
- SaaS Single Sign On Support (GA)
- New user roles using RBAC (PUBLIC BETA)
- Comments for Datasets & Models (GA)
- Use Case & Value Management (PUBLIC BETA)

Core Modeling
- Profit Curve and Payoff Matrices (GA)
- Unsupervised UX (GA)
- More Deep Learning For Text Data (GA)
- Chain Automated Runs (PUBLIC BETA)
- Control Text Representation (PUBLIC BETA)
- Recommend Blenders (PUBLIC BETA)
- Area Under the Precision-Recall Metric (PUBLIC BETA)
- Badges removal (PUBLIC BETA)

Location AI
- Native Geospatial file ingest (PUBLIC BETA)
- Auto-recognition of latitude and longitude (PUBLIC BETA)
- Location variable type (PUBLIC BETA)
- Derived Geometric Features EDA (PUBLIC BETA)
- EDA Map Visualizations (PUBLIC BETA)
- Local Map Tile (Basemap) Server (PUBLIC BETA)
- Spatial Featurizers in Model BPs (PUBLIC BETA)
- Accuracy Over Space Insight (PUBLIC BETA)

Customer Delight
- Bring my own test set (GA)
- Themes for UI (GA)
- Google BigQuery as a data source (GA)
- Select mode and settings at Rerun (GA)
- Manage Projects page upgrade (GA)
- Support "," as a decimal separator (PUBLIC BETA)

Visual AI
- Visual AI goes GA (GA)
- Explain predictions from image features (GA)
- Compute predictions via DPE (GA)
- Data Quality and User-Friendly Messaging (GA)

Tech Alliances
- Tableau write back (GA)
- MQ SQL write back (GA)
- Snowflake write back (GA)

Trusted AI
- Humble AI (GA)
- Template Builder (PUBLIC BETA)
- Approval Workflow (PUBLIC BETA)
- Target Leakage Multiclass (PUBLIC BETA)

Feature Discovery
- New Relationship Editor (PUBLIC BETA)
- Create Project from Multiple Datasets (PUBLIC BETA)
- Improved Feature Reduction (PUBLIC BETA)
- Prediction Point Enhancements (PUBLIC BETA)
- New Transformations (PUBLIC BETA)
- Column Name Language Localization (PUBLIC BETA)
Web Pages and Blogs for 6.1

What's New
In Release 6.1, we focus on the business end of enterprise AI with a new use case value tracker. We also introduce spatially aware models with Location AI, anomaly detection for Automated Time Series and champion/challenger models for MLOps. Here are just some of the highlights.

www.datarobot.com/new

5 New 6.1 Blogs
- Anomaly Detection
- Champion/Challengers
- Location AI
- Use Case Value Tracker
- Humble AI
Questions & Answers
Request a Free Trial Today!

Sign up at: https://www.datarobot.com/lp/trial/
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- **Engage, learn, and accelerate** your AI/ML journey
- **Connect** with peers to find solutions to AI challenges
- **Explore** helpful content to take your AI to the next level
- **Build** your brand as an AI expert & thought leader
- **Questions** aisuccess-webinars@datarobot.com
- **Join** your peers today at community.datarobot.com

Watch 29 new 6.1 Feature Videos at the community now!