DataRobot helps the insurance and other industries leverage the power of machine learning, providing a platform for users of all skill levels to produce accurate predictions in a fraction of the time required by conventional tools and methods. Leveraging the knowledge, experience, and best practices of the world’s leading practicing data scientists, DataRobot automates the machine learning process from data to deployment. Throughout the process, DataRobot provides plain language explanations into how and why the machine learning algorithms make decisions, enabling insurers to simultaneously achieve accuracy and reduce model risk via human-friendly model interpretability.

“DataRobot solves predictive modeling challenges across all core functions in an insurance company - marketing, underwriting, pricing, claims, audit, and operations. That by itself is extremely powerful, but what really differentiates DataRobot is its user-centric design. DataRobot was founded and built by insurance industry veterans, and we know that successful adoption of machine learning means engaging the users, regulators, and consumers.”

— Satadru Sengupta
DataRobot GM Insurance

Human-centric design, ideal for business users
Insurance domain expertise is key to developing effective predictive models. DataRobot enables business users and data scientists to generate accurate, interpretable, and transparent models quickly and efficiently. Including data scientists and end users in the entire process enables organizations to operationalize predictive models in a regulation- and customer-friendly manner.

Built-in guardrails
With DataRobot, modeling projects follow a consistent methodology based on best practices so users can’t “forget” to perform a critical step, such as model validation.

Speeds model evaluation
DataRobot builds a leaderboard so you can see which models perform best with your data, and provides the tools you need to explore and compare individual models.

Supports advanced tuning
DataRobot automates model tuning, but also supports manual tuning so data scientists can tune and adjust machine learning algorithms for even better results.
Insurance Use Cases

For more information about DataRobot use cases in insurance, visit our Insurance Solutions page.
• Submission prioritization
• Conversion modeling
• Direct marketing
• Fraudulent claim modeling
• Insurance pricing (pure premium, frequency and severity approach)
• Life insurance underwriting and mortality analysis
• In-force management: predicting life and annuity lapse
• Claim development modeling
• Claim payment automation modeling
• Premium audit
• Claims subrogation
• Claims litigation

A Focus on Actuaries, Customers, and Regulation-Friendly Design

Actuaries have their own requirements for predictive analytics and machine learning, and DataRobot incorporates the insurance industry domain expertise of some of its top data scientists into the platform to deliver a number of valuable features for actuaries.

Advanced insurance modeling
Frequency-Severity Modeling is the expected insurance pricing method used by European actuaries, and Generalized Additive Models (GAM) and Generalized Additive² Models (GA2M) provide the level of intelligibility and transparency needed by actuaries. Multiclass models are also available so you can predict results having more than two possible outcomes.

Ideal for actuaries
DataRobot supports advanced machine learning techniques for actuaries, including Offsets and Exposure, to support operational constraints and practices and Tweedie Loss metrics to increase robustness and accuracy.

Validated, editable rating tables
Validated rating tables are available for download from GAM and GA2M models to validate, obtain insight, or generate predictions, including the strength of signal captured by main effects and interactions and pairwise interactions found by the model. Additionally, the rating tables can be adjusted to make the relativities consistent with business rules, enabling an optimal blend of human insight and machine learning.

Insights for actuaries
Model X-Ray visualization include adjusted charts to incorporate the use of exposures and step functions that result from the Generalized Additive Models, providing more insightful information for actuaries.

Built for the Enterprise

Operating at enterprise scale requires blazing performance, strict adherence to controls, and relentless focus on data protection. DataRobot is an enterprise-ready platform, delivering the governance, training, and world-class support your organization needs to get up-and-running quickly.

Use on-premise or in the cloud
On-premise: You can deploy DataRobot on-premises on standalone servers, existing Hadoop infrastructure, or in a Virtual Private Cloud (VPC). Cloud: DataRobot offers a variety of cloud packages to meet your needs, including the DataRobot Cloud, powered by Amazon Web Services (AWS), or installation on the cloud vendor of your choice.

Leverages distributed processing
DataRobot leverages modern distributed processing, running experiments in parallel to radically reduce the time needed to run a complete data science project.

Enables rapid collaboration
With DataRobot, business users, data scientists, and stakeholders work together on machine learning projects to deliver better results with less wasted effort.

Supports advanced security
DataRobot offers native security for fine-grained role-based authorization and supports Kerberos and LDAP protocols. In Hadoop, it works with your existing encryption policies.

Integrates with Hadoop
DataRobot uses your Hadoop distribution’s application management services to distribute runtime libraries to Hadoop Data nodes. Working directly with HDFS, running predictions in DataRobot does not require a proprietary storage layer or moving data to an edge node. The DataRobot workload runs in YARN containers, so you do not need to partition your cluster to prevent resource conflicts.

Works with enterprise data
No matter where your data resides – relational databases, Hadoop clusters, SAS files, text files, or other sources – DataRobot quickly and easily connects to your data source.

Explainable models
Users can download DataRobot’s diagnostic charts, data, and documentation to share them with executives, stakeholders, and regulators.

Eliminates model deployment bottlenecks
There are multiple options for deploying your finished models with DataRobot, including native scoring, exportable prediction code, and prediction APIs for real-time and batch scoring.

Contact Us
DataRobot | One International Place, 5th Floor | Boston, MA 02110
www.datarobot.com | info@datarobot.com