

INTELLIGENT MANUFACTURING WITH H2O.AI AND SNOWFLAKE

Improve Manufacturing Efficiency, Reduce Costs, and Enhance Supply Chain Transparency

PREDICTIVE MAINTENANCE

By integrating historical, structured and unstructured data like images from the manufacturing floor in Snowflake, the H2O AI Cloud can monitor production equipment in real-time, detect anomalies or deviations from normal operations, and predict when maintenance is needed to improve equipment uptime.

QUALITY CONTROL

The H2O AI Cloud allows manufacturers to perform predictive analytics with real-time monitoring, analyzing both data and product imagery, and identifying any object anomalies with high accuracy and speed.

SUPPLY CHAIN OPTIMIZATION

By analyzing large volumes of historical data and data from sensors, machines, and other sources, H2O.ai can optimize production processes across the entire supply chain including document processing, inventory, demand forecasting, and transportation logistics as well as identify potential risks and inefficiencies.

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AI-enabled supply chain management has enabled early adopters to improve logistics costs by 15%, inventory levels by 35%, and service levels by 65% compared with slower-moving competitors.

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- [McKinsey, 2021](#)



REAL-TIME ANALYTICS

H2O.ai and Snowflake enable real-time analytics and insights in manufacturing to get a 360-degree view of the entire manufacturing lifecycle.



STRUCTURED & UNSTRUCTURED DATA

Live images and video can also be used for inferencing, with image processing performed in the cloud or on-premises, using a centralized eScorer.



FASTER SPEED TO DEPLOYMENT

Improve manufacturing efficiency by leveraging advanced ML techniques for predictive and prescriptive analytics.



CONSISTENCY & INSIGHTS ACROSS THE PROCESS

Enable consistent and accurate process metrics even for remote or subcontracted manufacturing processes.



APPLICATIONS FOR PERFORMANCE REVIEW

With the inference results in Snowflake, data science teams can use applications like H2O.ai model monitoring to review the model's performance for drift and overall correctness.



FAILURE PREDICTION & DELAY REDUCTION

H2O.ai models can return the Shapley reasons with the failure facilitating component reinspection and reducing

DRIVERLESS AI

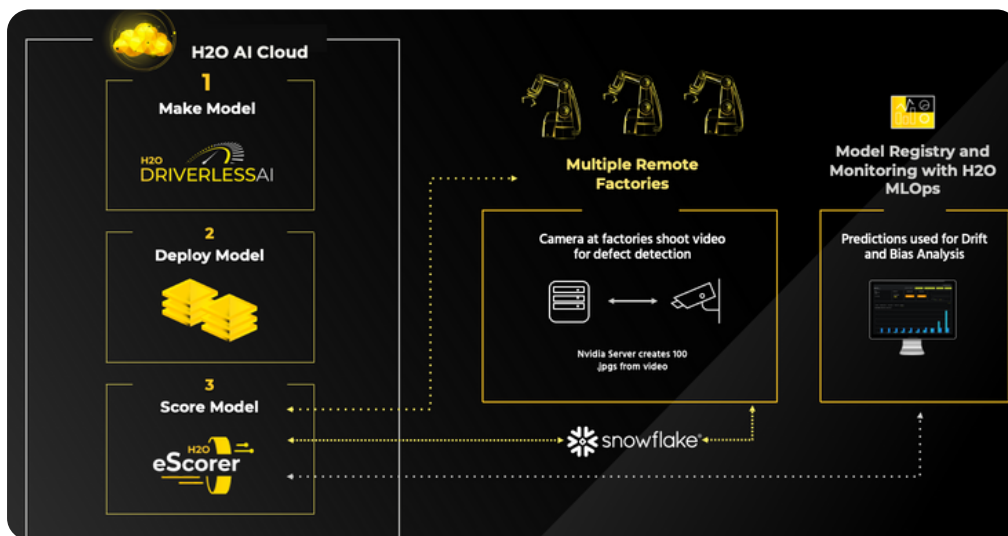
H2O Driverless AI delivers industry leading autoML capabilities with automation encompassing data science best practices across key functional areas like data visualization, feature engineering, model development and validation, model documentation, machine learning interpretability, and more.

HYDROGEN TORCH

H2O Hydrogen Torch enables all data scientists—from novice to expert—to build no-code deep learning models for image, video, and text data. State-of-the-art neural network architectures and transfer learning allow data scientists to build accurate deep learning models even with limited data.

MLOPS

H2O MLOps provides a collaborative environment that makes it easy for organizations to manage, deploy, govern, and monitor ML models in production. H2O MLOps provides a simple interface that enables end-to-end model management, one-click deployments, automated scaling, and model monitoring that provides automated drift detection for both accuracy and bias.



TELECOMS LEADER SAVES \$7M ANNUALLY WITH PREDICTIVE MAINTENANCE OF A SINGLE COMPONENT

This company wanted to enhance manufacturing processes through advanced machine learning, utilizing both tabular and unstructured data like images. The combined solution from H2O.ai and Snowflake accelerated decision-making and ensured consistency across various manufacturing stages. H2O.ai Driverless AI trained models using Snowflake data and deployed them through user-defined functions and eScorer. The Snowflake Stage Table acted as a distribution mechanism, enabling versioning and auditing, and inference metrics were collected and analyzed for future model training. H2O.ai models also provide Shapley reasons for predictions, minimizing delays in the manufacturing process.

About Snowflake

Snowflake enables every organization to mobilize their data with Snowflake’s Data Cloud. Customers use the Data Cloud to unite siloed data, discover and securely share data, and execute diverse analytic workloads. Wherever data or users live, Snowflake delivers a single data experience that spans multiple clouds and geographies. Thousands of customers across many industries, including 573 of the 2022 Forbes Global 2000 (G2K) as of January 31, 2023, use Snowflake Data Cloud to power their businesses. Learn more at snowflake.com.

About H2O.ai

H2O.ai, the leading AI cloud company, is on a mission to democratize AI. As a company, it distills the technical prowess of 30 Kaggle Masters into straightforward AI cloud tools that solve powerful problems. Goldman Sachs, NVIDIA, and Wells Fargo are not only customers and partners, but strategic investors in the company. H2O.ai’s marquee products of Driverless AI, Hydrogen Torch, and Document AI have transformed over 20,000 global organizations and over half of the Fortune 500, including AT&T, Commonwealth Bank of Australia, Citigroup, Nationwide, Hitachi, Kaiser Permanente, Procter & Gamble, PayPal, PwC, and Unilever. Join the movement of AI4Good at www.h2o.ai.