

DATAFIND. DATALEARN. DATACONNECT.

Action through understanding

The DataSkill ACUMI software suite gives data a voice with machine learning, AI and predictive analytics. Our three flagship ACUMI solutions—DataFind, DataLearn and DataConnect—are equipped with pre-existing assets and modules, including algorithms, annotators and visualization capabilities to work seamlessly across your organization.

The massive volume of data being produced today is overwhelming to organizations. ACUMI enables you to intelligently automate the time-intensive tasks of clerical staff and “knowledge workers.” Without ACUMI, these processes are more prone to bottlenecks and errors. This is because humans simply can’t scale at the same level of efficiency or consistency, generating suboptimal results.

ACUMI DataLearn

Knowledge analytics

Predictive diagnostics and decisions regarding cognitively complex challenges, such as AI, deep machine learning and behavioral evaluation.

ACUMI DataFind

Text analytics

Predictive interpretations and decisions derived from unstructured data found in social media, PDF, voice-to-text and similar sources.

ACUMI DataConnect

IoT analytics

Real-time predictive alerts and notifications regarding any equipment or device in motion, whether it be biometric, mechanical, environmental or mobile.



ACUMI DataFind

TEXT ANALYTICS

ACUMI DataFind uses predictive interpretations and decisions derived from unstructured data found in social media, PDF, voice-to-text, handwritten notes and other sources. It then combines unstructured data with structured data to produce true and complete insights. Clients often begin with this text analytics solution to accurately interpret the unstructured data flowing through their organizations.

Understanding unstructured data can have a dramatic impact. You can see results within a few weeks of engaging our data scientists to prove the ACUMI concept. A working prototype system, using your data, is quickly constructed with ACUMI DataFind, followed by a brief pilot program. Production is deployed shortly thereafter. Our solutions are built for speed and high-quality, innovative results. We'll prove it.

Since data is the foundation for repeatable, successful decisions, you can't take rational actions when missing key information. ACUMI DataFind enables you to easily discover and add new data sources. This intelligent solution moves with your business while providing predictive insights that you can't otherwise find in your data. ACUMI DataFind extracts the true value of your data, both structured and unstructured.

Key programs and functionality of ACUMI DataFind include:

Ontology Generator

This module automatically discovers relevant terms and expressions from written communications, such as chats, email and voice-to-text. It's often difficult to capture customer-specific ontologies. Some are non-intuitive and even your best expert may miss them. Ontology Generator enables an analytical approach that doesn't rely entirely on domain experts.

The Ontology Generator results are used to set up and train cognitive solutions. The module provides higher cognitive accuracy in a shorter timeframe, as it uses best-of-class algorithms to ensure relevant results.

Natural Language Processor (NLP)

This module pre-processes text to remove punctuation and mark-up "noise" for subsequent analysis, providing a cleaner view of the text for analysis and human annotation. The NLP reduces analyst effort, as it's configurable for specific applications and data sources.

Concept Extractor

This module identifies and extracts the most critical concepts to your organization—with high precision. It's critical to discover changing or emerging concepts. Concept Extractor automates the discovery process rather than looking for it after the fact. It captures your knowledge workers' expertise and applies it to the data, resulting in the remarkable ability to scale top staff member expertise through automation.

Attaining these concepts from your knowledge workers is the game-changing value of automating through AI. Across industries, Concept Extractor captures analytical best practices, including clinical, legal, regulatory, customer service and administrative. The information supports annotations in cognitive solutions. Benefits include scaling human knowledge and expertise, increasing productivity, reducing errors, improving risk management and lowering liabilities.

Scaling best practices has become increasingly impractical for staff, especially with the proliferation and production of structured and unstructured data. Concept Extractor covers financial issues, customer identification, clinical and common services. It's highly configurable to process even brand-dependent concepts, organizational metrics, regulatory standards, services treatments, investigations, offerings and promotions. The module then applies these special skills and concepts to text analytics. This increases accuracy of analysis, which translates into more complete process automation.

Classifier

This module represents specialized classification algorithms curated and tuned to provide the best performance on customer conversations. The resulting models provide real-time processing by a cognitive solution or for analysis. The Classifier asset surpasses generic classification equivalents by providing robust models for skewed data sets common to customer service communications and investigative research. Classification enables you to learn from your experiences.



ACUMI DataLearn

KNOWLEDGE ANALYTICS

ACUMI DataLearn leverages predictive diagnostics and decisions regarding cognitively complex challenges, such as AI, deep machine learning and behavioral evaluation. This knowledge analytics solution is an easy transition from text analytics (ACUMI DataFind), as it models and produces neural networks and machine learning solutions.

Key programs and functionality of ACUMI DataLearn include:

Neural Net Modeler

This module provides an inventory of deep neural nets with topology optimized for very specific tasks, such as retrieval of knowledge base documents for distinct and complex problem solving. This is processed with exceptional accuracy to address a variety of industry challenges, such as clinical aggression, customer sentiment, legal investigations, disease diagnosis, IoT and equipment performance, trade finance, and a variety of other use cases. The key benefit of this module is optimal automation performance for these tasks versus other (general and academic) machine learning algorithms.

Machine Learning Algorithm Builder

This module provides a set of algorithms for a wide spectrum of applications with tuning techniques that ensure optimal machine language performance. The benefit is delivery of a continuous stream of innovations direct to businesses through embedded ACUMI formulas, tools and processing routines.



ACUMI DataConnect

IOT ANALYTICS

ACUMI DataConnect leverages instant sensor data to provide predictive alerts—because real time is too slow in today's connected world. The powerful solution gathers this data and combines it with machine learning, resulting in critical predictive notifications before a piece of equipment fails. ACUMI DataConnect works with any IoT device, whether it's biometric, mechanical, environmental or mobile.

ACUMI DataConnect is a Guinness World Record-setting solution that ensures users instantly and predictively understand their equipment and IoT devices. It can capture sensor data through the most sophisticated communication networks, including satellite, open ocean, underwater and other rugged environments and terrain. For clients with device-intensive businesses, the solution dramatically optimizes environmental, operational and investment-grade responsibility and performance.

ACUMI DataConnect predictively monitors any device or equipment, either stationary or in motion, to interpret IoT signals on the fly. The solution then presents alerts and guidance for anything from safety and manufacturing lines to medical equipment, oil and gas, motorsports, cell phones or wearables. The solution allows machines and humans both to make the best decisions based on today's complex data. Thanks to predictive alerts, users never have to say: "If only I had known."

Key programs and functionality of

ACUMI DataConnect include:

IoT Connector and Interpreter

This module captures signals at or near the source, which is possible due to multiple, disparate feeds of IoT data. This is integrated to cloud-based systems for machine learning and human-guided updates. The solution then leverages the power of AI to improve the types of analytics where the equipment is performing. This has dramatic results in terms of maximizing the lifecycle and peak performance of equipment, reduction of cost, and avoidance of fines through compliance and regulations.

For many industries—including oil and gas, public utilities, healthcare, and motorsports—investors are now demanding a much higher level of responsibility from their portfolio companies. They're requiring these companies

to understand what's happening with each IoT asset, and then predictively determine how best to maximize performance, avoid or plan for breakdown, and minimize environmental and human impact. This module helps meet these critical demands.

IoT Processor

This module deploys smart processing of IoT data at the source—for consumption by downstream analysis and visualization components. It also improves the timeliness and quality of decisions by reducing the effort to understand and process streams of IoT data.

IoT Alerts Manager

This module automates processes, generates notifications and triggers alerts based on real-time IoT data. It also leverages cloud-based models and historical "big data" searches. The solution connects and communicates to humans in a variety of ways, depending upon the user's environment. These communication methods include reports, graphical displays for enhanced visualization and even machine/human voice interaction (critical in motorsports and team performance environments).

The Squid

This module represents the central management system for disparate sources of IoT data. It ensures that channels are available at the frequency and in the format appropriate to each data consumer. The Squid is designed to reduce latency and load on the other modules.

The T3 Telemetry Guide

This module provides the blueprint for a functioning, end-to-end IoT solution. Each ACUMI module is represented and can be used as a template to assess requirements and develop your specific application. The current guide helped set a Guinness World Record by providing real-time telemetry and analytics to the pilots, crew and fans of high-speed offshore powerboat racing.



ACUMI | System tools

ACUMI system tools reduce setup and configuration efforts across your organization. These tools can be utilized by all three ACUMI products to support the DataSkill rapid deployment process.

They include:

- State-of-the-art rules engine for AI
- Preconfigured annotation pipeline
- Prebuilt neural models and learning algorithms
- Predefined dictionaries and APIs
- Confidence-based parsing rule framework
- Visualization options for human interpretation

Rules Engine

This module set implements highly configurable business logic. As a syntax-based rule parser that's iteratively configured rather than coded, the Rules Engine enables rapid adaptations in processing to reflect changing business practices and unique process scenarios. It's critical when deploying an AI solution to maintain a "razor's edge" with data and rules. This module speeds up delivery of the cognitive solution, ensuring the highest level of accuracy.

Exporter

This module converts Watson and ACUMI processing outputs, result sets and alerts into formats suitable for visual mining and reporting. The benefit is the integration

with multiple reporting tools from Watson, SAP and Amazon—and other industry-standard tools already in place within most organizations. This results in immediate visual interpretation, highly specialized views of data and reduced setup and configuration efforts. Many of the visualization options sit on top of "live data" and literally adjust on the fly with the currency and flow of data. Static reports and dashboards are becoming tools of the past as live visualization—and even virtual reality—continues to gain momentum in terms of intelligently analyzing your organization.



> Contact us today

for a free ACUMI demo or to learn more from one of our knowledgeable data scientists.

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