WHITEPAPER

Harnessing the AI Explosion: Enhanced Software Solutions by Revvity Signals
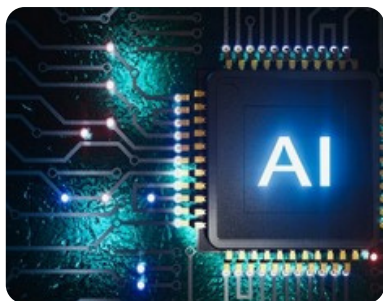

revvity signals

Leveraging AI in Advanced Software Solutions to Accelerate Science

At Revvity Signals, we seamlessly integrate cutting-edge artificial intelligence (AI) technologies into our trusted, globally deployed software solutions. Over the past decade, we have enabled researchers to leverage machine learning (ML) models for advanced analytics, and today are taking this further by embedding the latest AI advancements directly into our secure, reliable platform. By doing so, Revvity Signals empowers scientists to overcome complex challenges, accelerate discovery, and focus more on innovation rather than routine tasks.

Our comprehensive solutions—encompassing ChemDraw®, Signals Research Suite™, and Signals™ Clinical—are trusted by research and development (R&D) teams across pharmaceutical, biotechnology, clinical, and materials science sectors. These products are designed to address the unique challenges faced by scientists, driving success through AI-enhanced capabilities that help scientists achieve new breakthroughs more efficiently.

Our Strategy for AI

We are advancing Revvity Signals solutions with a comprehensive AI strategy that integrates AI across both our products and internal processes. Our product strategy is built on three core pillars: empowering scientific researchers via generative AI, accelerating drug discovery using specialized scientific AI, and enhancing data readiness for AI integration. In addition, we are optimizing our customer engagement through AI-driven business operations to ensure a seamless customer experience.

With widespread adoption of our software, we are uniquely positioned to deliver AI capabilities directly to the scientist's workspace, streamlining daily workflows while ensuring robust data security. Our extensive history and deep expertise in cheminformatics and bioinformatics allow us to deliver the most advanced scientific algorithms and models to all researchers, democratizing access to advanced AI and empowering scientists to achieve new breakthroughs.

Enhancing Scientific Discovery Software via Generative AI

By embedding generative AI and advanced natural language processing into our software, Revvity Signals equips scientists with self-service tools that bring powerful advantages to their work. AI streamlines user workflows, enabling scientists to focus on innovation rather than routine tasks.

By harnessing these AI-enhanced research capabilities, users can make faster, more informed decisions, accelerating discoveries:

- Semantic Search: Both simple and scientifically complex search queries are enhanced by AI's contextually relevant search capabilities, handling queries and searching databases in multiple languages.

- Summarization Assistant: AI enables the rapid and efficient summaries of documents from SOPs to scientific literature, supporting researchers without leaving the Revvity Signals environment.

- AI Copilots and Agents: From analyzing data and identifying trends to enhancing writing quality and providing seamless access to relevant knowledge, these AI tools empower scientists throughout their workflows. They offer intelligent suggestions, build visualizations, and expedite research and communication, helping teams move from insight to action more efficiently.

Science-based AI

AI's influence in scientific research continues to grow with new algorithms devoted to specific applications. Revvity Signals keeps pace by enhancing our software with AI models specifically tailored for scientific research applications. A use case is the integration of specialized AI and machine learning algorithms for large and small molecule synthesis into our design and analysis tools.

With this AI integration, Revvity Signals provides scientists with advanced modeling capabilities previously only accessible to bioinformaticians.

- Chemical reactions recommendations: AI assists scientists by recommending optimal conditions for chemical reactions, including suitable catalysts, solvents and other key reaction parameters, streamlining the synthesis process.

- **Interact with antibody developability dashboards: AI evaluates antibody candidates by predicting** structures from sequences, estimating accessible surface areas around potential sequence liabilities, and scoring candidates using adjustable developability metrics, enabling scientists to focus on the most promising designs.

Make Data AI-Ready to Unlock its Potential

AI is only as effective as the data it works with. Revvity Signals solutions ensure your data is unified and modeled to be fully AI-ready, allowing it to be easily interrogated, analyzed, and evaluated by AI tools.

Our solutions :

- Optimize data preparation for AI integration.

- Unlock the full potential of AI's speed and intelligence.

- Bring greater value to your research.

AI for Business

At Revvity Signals, we appreciate the power of AI because we use it to elevate many aspects of our own business. We have integrated AI across our organization to improve our offerings, strengthen business processes, and drive customer success.

- Smarter Customer Support – Our AI-driven customer support empowers users with efficient self-service tools, enabling them to quickly find answers and resolve issues independently. This enhances customer satisfaction, reduces wait times, and provides a more seamless support experience.

- Enhanced Data Security – Our security operations utilize AI-powered heuristic learning algorithms to detect and flag anomalies instantly, ensuring your data remains secure and protected at all times.

- Streamlined Sales Support – AI optimizes our sales processes by enhancing RFP/RFI management, enabling accurate and timely responses to customer requests, ultimately improving communication and accelerating engagement.

Why Wait? Transform, Scientific Research with AI

The future of AI-driven research is already here with Revvity Signals' advanced software solutions. Our platform ensures that your data is ready for AI, integrates generative AI to enhance everyday workflows, and provides specialized science-focused AI tools to optimize research. Scientists using Revvity Signals are equipped with the tools to be more efficient, make well informed decisions, and accelerate the pace of scientific discovery.

Don't wait—embrace the power of AI to transform how your organization approaches research and development. Learn more about how our solutions are helping scientists harness the full potential of AI.

https://revvitysignals.com/revvity-signals-artificial-intelligence

Revvity Signals is the Scientific Informatics and SaaS Platform Business for Revvity

At Revvity, "impossible" is inspiration, and "can't be done" is a call to action. Revvity provides health science solutions, technologies, expertise, and services that deliver complete workflows from discovery to development, and diagnosis to cure. Revvity is revolutionizing what's possible in healthcare, with specialized focus areas in translational multi-omics technologies, biomarker identification, imaging, prediction, screening, detection and diagnosis, informatics, and more. With 2023 revenue of more than $2.7 billion and over 11,000 employees, Revvity serves customers across pharmaceutical and biotech, diagnostic labs, academia, and governments. It is part of the S&P 500 index and has customers in more than 190 countries.