AI IN PRACTICE

Hoosier Innovators Show Vision

By Rebecca Patrick and Anthony Schoettle

BizVoice® presents a snapshot of three Indiana companies that have made a name for themselves in integrating artificial intelligence (AI) into the solutions they deliver for their customers:

POLARIS Laboratories®

Dateline: Founded in 1999, it's an independent fluid analysis company serving sectors including transportation, oil and gas, construction, mining and power generation

With multiple laboratories and innovative solutions, POLARIS has long been a worldwide leader in its industry sector. Then in December 2024, with the launch of its AI-driven platform, Aurora, the organization elevated its offerings to a new level.

Aurora is an advanced analysis engine developed by POLARIS Laboratories to enhance equipment reliability and maintenance strategies. It leverages the company's extensive database of fluid sample analysis (over 10 million samples) and combines AI and machine learning to provide more accurate, reliable and timely insights.

"Aurora aims to help customers anticipate issues, minimize downtime and make better data-driven decisions for extending the lifecycle of their equipment," states Mark Westlake, chief information officer at POLARIS Laboratories.

The information the client gets back details any issues and offers solutions based on the equipment – even down to what brand it is, the industry the customer is in and the conditions under which the equipment is run. "For every sample sent in, we deliver a report back to the customer that not only shows them the results of the scientific testing, but we do an interpretation, which is really the differentiator for us," Westlake explains.

Aurora – and the level of detailed information and predictive analytics it provides – is a "game-changer" for POLARIS customers, Westlake relates. The worldwide rollout will be complete by year's end.

Internally, Aurora is proving vital to POLARIS in two ways: speeding up the processing of samples – some 7,000 to 10,000 a day around the world – and allowing for more information consumption.

"We've built Aurora in a way that we could feed additional data into our models … it allows us to throw way more data than humanly possible into a model and make better and better predictive recommendations to customers for their maintenance," Westlake asserts.

The AI-driven platform is also making its mark by enhancing what human workers at the Indianapolis company do.

"In our world, the data analysts are vital people to our operations, and they do a lot of high-level testing that involves microscope work and things where AI is not going to take the place," Westlake reasons.

"So, we have plenty of work for our data analysts, and Aurora is not meant to replace data analysts. It's meant to speed up the operation of initial recommendations that they can review so that we can increase our volume. Now we can start to feed more and more through the engine and really just increase our volume. The automation is vital for us to be able to scale and to grow as a business."

POLARIS Laboratories is laser-focused on bringing its Aurora platform "to all labs around the world … and really helping customers adapt the customization that they want," says Mark Westlake.

RESULTANT

Dateline: Formed in 2008 as KSM Consulting from parent company KSM; rebranded in 2021; located in downtown Indianapolis

Through positive outcomes driven by data analytics, technology and digital transformation, Resultant serves as a partner by solving problems with its clients rather than for them, says Sindhu Adini, the firm's vice president of professional services.

AI has become a big driver for many of their customers, and Resultant has established itself as a leader in the field. Much of that work is with government entities and state agencies.

"(They) are really stepping up when it comes to AI," Adini explains. "They're calling for more and more transparency, more efficiency and more effective service delivery. And they're not doing this alone. They're working with groups like education boards

A big part of the service Resultant provides, touts Sindhu Adini, is "making sure that there is change management and enabling AI literacy. We are learning AI ourselves, but we are also bringing our clients along and guiding them with confidence on how they adapt to this (AI) shift."

and data quality campaigns alongside with governors and education leaders to shape what the AI policy looks like. And we at Resultant are right there helping the agencies turn those policies into action, essentially making government work better through smarter and faster processes by leveraging AI."

One example of Resultant's work with AI has helped the Indiana Department of Workforce Development build a platform – called Pivot – that helps people explore career paths and determine what training is available based on "real workforce data," Adini relates. "We are also leveraging that same AI to help people figure out what the return of investment on education is, right when they either start their career or they're midway making changes.

"This is also helping educational institutions craft programs based on the workforce demand. It's a win-win from both the workforce perspective and an education perspective."

While education "is definitely a big focus" for Resultant, it's doing similar AI work in health and human services as well as other core operational agencies and organizations. Adini offers, "The goal is how do we help them leverage AI to become more efficient and productive so they can serve their citizens better."

Regardless of the sector, what Resultant does is craft AI-powered wholistic solutions.

"What we are doing for clients is helping them define what that AI roadmap looks like; setting up AI governance and data governance so that they are set up to adopt AI in a responsible way," Adini emphasizes.

"We address (the questions), 'Where do you start? What are the problems you should tackle and then how do you grow and scale from there?' So, we are basically focused on enabling the customer and making them AI-ready all the way from their operations team to the technology team so that every team is operating efficiently. At the end of the day, we are making the whole organization AI-ready and not just pockets within the organization."

SEP

Dateline: Founded in 1988 by four Rose-Hulman Institute of Technology graduates; now one of Indiana's largest software product development firms

"We've been investing heavily in building an AI practice for the last five or six years that started before the current generative AI craze," imparts Jon Fuller, SEP's director of software engineering. "Before ChatGPT came out, we had already seen the writing on the wall."

As an industry leader, SEP's AI software has some interesting uses. The applications are far from cookie-cutter and can be quite complicated. For instance, one of SEP's clients is a portable sawmill maker, and SEP's software can help determine – as the tree is being felled – where the nearest lumber sellers are and how they would want the wood cut for purchase; 2x4, 2x6 or perhaps 4x4.

Another piece of its AI software can look at a municipality's road conditions, the budget to maintain and repair those roads and determine which roads to patch, which roads to repave – partially or totally rebuild – and which roads to do a combination of those things.

"It has the ability to optimize the budget spend for your municipality over a 10-year period and raise overall roadway quality," Fuller explains.

"We build custom software for our customers and specifically for AI," he adds. "We lean really heavily into that. The examples (noted earlier) are extremely detailed. Those are specific solutions we've created for specific needs."

In late 2022 and into 2023, as the text-, speech- and image-generating ChatGPT caught the media's and public's attention, SEP officials saw an explosion of client requests to weave AI into their solutions. But Fuller stresses, AI is not a cure-all.

"The tools in the landscape have changed so much over the last couple of years that it is really almost every new engagement that we see wants to have some AI component, whether that's just for marketing appeal, so they can tell their customers that they offer AI-powered (solutions)," Fuller says.

"This technology offers a lot of new unlocked opportunities. We try to advise and guide our customers in the sort of responsible use of AI."

One manifestation is how to use AI to bring out workers' "superpowers."

"Whether they're drug researchers or folks working on an assembly line in a factory, (AI can) let them do their job 10 times better, 10 times faster," Fuller surmises. "So, they can basically get rid of all of the boring parts of their job or the parts that a computer can be good at doing.

"AI can take all of that off their plate and let them do the work that they're really good at. That's been really clear to us as the value proposition we can most often offer our customers."

Jon Fuller ponders what the AI generation will bring to the SEP workforce: "They're going to think about problems completely different than (people) who have spent most of their career without ChatGPT at their disposal."

RESOURCES: Sindhu Adini, Resultant, at www.resultant.com | Jon Fuller, SEP, at www.sep.com | Mark Westlake, POLARIS Laboratories, at www.polarislabs.com