Harvard University | Journalism Capstone
Theme: Al in the Heartland
(The directive was to cover Al developments specific to certain segments in the state of Indiana)
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Hoosier Companies Lean on Artificial Intelligence to Sway and Sell

No longer limited to sci-fi movie plots, thinking machines are here to sway, nudging buyers to pull out their credit cards, click the "buy" button, and come back for more. Some of that technology is grown here in the Hoosier state, with a growing number of businesses banking on artificial intelligence — Al for short — as a tool for enhancing customer experiences, accelerating rapport and sales.

Say a business owner wishes to send personalized messages to 2,000 people, based on the last thing each person did while visiting his store, website or social media profile. Or perhaps he'd like to pinpoint where a competitor's web traffic comes from, where to advertise next, or the overall sentiment about his brand on social media channels. Al can do all that, in the time it takes him to pour his morning coffee.

As it happens, these are some capabilities Hoosier companies like Vemity, DemandJump, Salesforce and others claim to offer businesses today.

Using AI to sell

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Put simply, Al refers to machines' ability to learn, get smarter over time, and create their own algorithms to solve problems. Tyler Foxworthy, chief scientific fellow at DemandJump, prefers the term "machine learning." Unlike "Al," which has morphed into a catch-all term for computer automation, machine learning represents something specific, he explains: "It's effectively taking observations and wrapping those observations into some model to make predictions."

When it comes to wooing customers, there's much AI can offer to magnify human efforts, say researchers at Gartner. Take customer relationships, for starters. Today's consumers have a giant appetite for personalization and shrinking tolerance for irrelevant messages that don't speak to their needs or wants. Meghann York, senior director of product marketing for Salesforce, explains it like this: We all interact with applications like Facebook, Netflix and Amazon, and we're used to hyper-personalized experiences. "We've come to expect that level of personalization from every brand we interact with," she says. "The challenge is that offering that level of personalization is really hard."

Traditionally, a business would gather data, have analysts crunch that data, then make some guesses. From there, they'd organize customers into segments and send off identical messages to hundreds or thousands of people. But buyer expectations have changed, says York: "We want messages that are precisely directed to us." That's where AI comes in, helping companies predict consumer behavior and deliver custom experiences, faster than it might take them to study a spreadsheet.

Portions of Einstein, Salesforce's Al component, are developed in Indianapolis, leveraging the company's acquisition of ExactTarget in 2013. Functions built locally include Einstein Recommendations, which discern

which content a customer would find most compelling, and Einstein Engagement Scoring, which ranks the likelihood a recipient might open, click or buy from an email.

Meanwhile, downtown-based DemandJump counters a different marketing problem: helping businesses identify where to place their online advertising dollars to yield the highest number of clicks, downloads, purchases — whatever the desired outcome might be. DemandJump also identifies where competitors get their traffic and overlays signals from both clients and their competitors to deliver best-bet predictions. This enables companies to place the right ad, at the right time, in front of consumers most likely to buy. Many DemandJump clients quadruple the return for their online marketing investment, says Foxworthy.

For more unique business problems, there's Vemity, a pay-as-you-go, Al-as-a-service startup built to enable "even the most inexperienced developer" to incorporate Al into any project or product, its website claims. Vemity clients have used the platform to predict aspects of manufacturing operations and consumers' propensity to donate to charities, says CEO Brandon Boynton. In all, "Al can open doors that have traditionally required human intervention that wasn't scalable," he says.

Lowering the bar to cost and access

Why aren't more businesses on board with AI? Cost is one obstacle, says York. Boynton agrees: "Until now, machine learning was restricted to companies with deep pockets that could hire AI engineers."

That access hurdle is why local providers like Vemity, DemandJump and Salesforce have sought to "democratize AI," an expression both York and Boynton are fond of using. What they mean: making AI accessible for businesses of all sizes, with relatively little expertise, equipment or investment required.

A second obstacle to AI adoption is the fact that many business leaders don't know what to do with it. "We've had a lot of meetings where people say, 'Here's the data we have. We don't really know what we want to do,'" says Boynton. "They need someone to hold their hand and guide them through the process." This need for handholding has been a mixed blessing for Vemity, creating an unexpected dynamic: greater demand for its expertise than its product. Consulting is profitable, says Boynton, but makes it harder for Vemity to scale.

A third obstacle to AI adoption is the status quo, which some marketers are content with. It's tough to justify change when companies are satisfied with their results. In those cases, York recommends marketing and sales teams conduct small experiments with AI, and measure the results.

As for fears that AI might displace workers, AI is bound to eliminate some jobs but also create others, reports Gartner. Mostly, the technology just makes workers more efficient. "In reality we're just taking away the stuff marketers don't like doing anyway," says York, "freeing them up to do things like creative strategy or getting to know a customer in person."

Local trends reflect wider market shift

According to Gartner, customer engagement and digital marketing stand out as top areas where companies are running early AI experiments. Its researchers predict AI will transform marketing over the next several years with applications like real-time personalization, conversations between people and machines, greater marketing

orchestration and analytics. By 2020, all new tech applications will have an AI component. Echoing York's advice, Gartner recommends focusing on near-term AI initiatives to automate data-heavy, time-intensive tasks.

Using AI to solve business problems benefits more than just businesses, says Sara Croft of TechPoint, a growth accelerator for Indiana's tech scene. "A vibrant tech market helps us to attract talent and make Indiana a more prosperous place for kids growing up here and graduating from local schools," she reasons.

Al talent hard to come by

Speaking of talent, AI know-how is hard to come by, says Foxworthy. "It's much easier to train people than to find them," he adds. His most reliable recruiting channel has been hiring students as interns, then training them up as machine learning experts. Despite feeling Indiana universities are on the right track in their data science programs, he's also found many students aren't learning fundamental AI skills needed in the industry.

Timothy Carone, who teaches AI at Notre Dame's Mendoza College of Business, acknowledges Indiana universities could benefit from a stronger collaboration with the business sector. "We don't have any kind of a feeder system set up," he says. "It's sort of a cart before the horse problem. Do universities create something like this to draw companies in, or do companies tell us what they need and ask us to align with them?"

Spotting AI fakers

Not every vendor touting AI capabilities can be trusted, warns Boynton. So much gets labeled as AI, it's tough for non-experts to detect who's doing legitimate AI work and who's peddling snake oil. Foxworthy suggests the following sniff test: "Give them a sheet of paper. Tell them to outline in technical detail how their AI works." Someone who can't articulate how each component works and why it matters, doesn't really understand it, he says.

Carone employs a similar tactic: "I ask for a demo and ask vendors to have a couple of experts in the room to answer my questions." Then he asks deep questions. "What's behind this gadget? How does it work?' If they can't answer and refer me to a colleague who's not available, I stop the demo," says Carone. Just as important are customer references, he adds: "At least get a customer on the phone anonymously if they're under a confidentiality agreement. Otherwise, I'll cut them loose and say forget it."

Proceed with caution

Before jumping into AI, Foxworthy recommends business leaders think deeply about what they want to get out of AI, and whether AI is the best solution to the problem. "I've seen quite a few people say, 'We need a data scientist because everybody has a data scientist. We'll hire one, put some AI in there, and start spinning out gold coins," he cautions.

Once you've figured out what problems you want AI to solve, start small, measure results and adapt as needed, says York. "You don't have to revamp everything you're doing right away," she says. "Take it slow. Prove it for your business case, then determine where it could go next."

Sources:

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