Unlocking value: How data science is helping Alabama Power make 2024 a transformative year

By Tom Martin
January 16, 2024

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Data science is opening up new avenues for utilities to quickly analyze the data available to them, which enables their engineering teams to diagnose system issues in ways that were previously unattainable.

With 2023 now in the rearview mirror and a fresh year upon us, I caught up with Jesse Woods, manager of data analytics for distribution, Alabama Power, to reflect on the role data science is playing at his utility, highlight successes to date, and consider what 2024 has in store.

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Tom Martin: What's the state of data science today at Alabama Power? How is it viewed at the company?

Jesse Woods: Our team at Alabama Power is, and has been, very fortunate to have incredibly strong support for our efforts to continue to improve the way we operate through data-informed decision-making. Our company leadership proactively engages to help make the desired transformation happen. That's an ideal scenario.

From that strong foundation of support, we've been able to get the whole organization excited about data science. When I step back and look at 2023 as a whole, I think it's the year we put the right pieces in place—technology, tools, data, architecture, problem-solving mindset—so that we can hit a home run in 2024. Another way of putting it is, we've been a little bit like scientists building our prototype in the lab. In 2024, we want to get it out into the field, get it used, and refine it further based on user feedback

to really deliver value to our customers.

TM: That sounds really interesting. Can you drill into where and how you're currently applying data science and what that might look like in the coming year?

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JW: Absolutely. We're intent on unlocking more value from our reliability data in service of improving grid resiliency and customer service. We continue to focus on how many outages a customer experienced and what the duration of those outages was. Data science is unlocking new ways for us to rapidly iterate on that data to help our engineers diagnose problems across our system in ways they haven't been able to before.

These outages could be caused by a variety of different things, such as tree limbs falling onto power lines or bird or rodent damage. Now we can capture this data granularly and have it available at employees' fingertips. Broader, faster access to this information could be a game changer for us, driving better decisions and outcomes for customers.

So, we have taken strides in applying data science to reliability and resiliency issues and have even bigger ambitions for this approach in 2024: to get in front of repeat outages and make meaningful improvements.

Data science is also helping us discover and interact more productively with customers adopting EVs. We're using AMI data to help identify our EV owners and introduce them to programs that benefit all customers, reduce stress on the grid, and save them money.

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Lastly, we've used data science to great effect to better position work crews to restore power more quickly and cost-effectively. We've definitely had some great wins with data science in 2023, but I think we've just scratched the surface. The best is yet to come.

TM: It sounds like you're building momentum, which is great to hear. Any advice from the trenches that you can share with your fellow utilities?

JW: At Alabama Power, we've put our energy into finding the right use cases for data science—the ones that are going to provide the most value to our business. Along with examples I've provided already, we're using the data to tell us where and how to invest in our grid to create the most value for our customers.

And we're getting there by *doing*. We're teaming our subject matter experts with people like the folks at E Source who understand data, speak data, and can elevate data in a utility environment. When you have these two ingredients working well together, you can get a lot done and be successful. That's our recipe for success!

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