Energizing the Oil and Gas Industry with AI

Changes abound in the energy industry, from shifting prices to new extraction methods. For a business built on complex datasets and workflows with disparate systems and data sources, technology like Artificial Intelligence (AI) and Machine Learning (ML) can help you rapidly innovate and compete cost-effectively while scaling to future needs and keeping crews safe.

Amazon Web Services (AWS) has been investing deeply in AI for more than 20 years. Artificial Intelligence is the backbone for Amazon.com's recommendations engine, the Echo devices powered by Alexa, and the Prime Air drone delivery initiative. AWS can help the energy industry to innovate faster, from upstream to downstream, whether it's for predicting risk analysis for drilling, or detecting operating anomalies in real-time data and proactive monitoring. AWS ML services provide easy-to-train models, and API-driven, pre-trained services. They support every major deep learning framework, and offer a broad set of compute options so you can run any ML use case quickly and easily. Let's take a deeper look at AI and ML applications within the energy industry.

Accelerating cost-effective innovation, scaling to demand

AI and ML can improve your critical business functions and enable innovation, while quickly adapting to the current demands of the oil and gas market:

- Ingest and manage large datasets to train algorithms to discover prospects more efficiently, automatically scale cloud usage based on need, and effectively increase point of sale (POS).

- Automate processes and eliminate manual interpretation by geologists, engineers, and geophysicists so you can speed up the time to insights on laborious data sets. This enables you to optimize drilling to production by identifying the best spots for well placement and improving geosteering outcomes.

- Optimize your equipment with proactive and predictive maintenance.

- Streamline factory efficiency in operations and mitigate risks in hazardous environments, improve performance with preventative maintenance strategies that significantly reduce operating costs, and reduce non-productive time (NPT).

- Train your ML model in the office and run it on the rig to instantly deliver valuable insights from your drilling and production operations.

- Use high performance computing (HPC) for complex, remote 3-D visualizations and to enable collaboration that's faster and more cost-effective.

Drilling down into the future

When you're ready to begin exploring AI and ML for your oil and gas operations, contact your AWS account team, who can help provide the support and guidance you need to begin this journey. See how you can enable your business to meet increasing global energy demand and realize the financial and productivity benefits that come with AI and ML technology solutions.