

# ML & AI for Oil and Gas

Mosaic is the ideal data science partner for an oil and gas operator looking to inform strategic and operational decisions with AI-derived insights. We have developed and deployed advanced machine learning models and decision support capabilities for various oil and gas customers.

## Oil and Gas Use Cases



### Fuel Price Forecasting

Enterprise AI can predict supply and demand for commodities and compare against forecasts it creates for price trends. This insight allows traders to maximize profit by leveraging arbitrage opportunities across place and time.

**Customers:** ExxonMobil, Devon Energy



### Midstream & Downstream Operations

Midstream and downstream operators can utilize ML – from optimizing raw inputs to transport strategies between production and refining/processing locations. Accurate predictions can forecast the need for maintenance to minimize downtime of critical operating equipment.

**Customers:** PPL, Suncor Energy, ExxonMobil, Devon Energy, Spire



### Computer Vision & NLP

Oil and gas firms can train deep learning models to identify machine degradation, adverse weather, fraud, and other events in their operations. NLP models extract, interpret and generate human text. Combined, these flavors of AI can return information from millions of scanned documents.

**Customers:** Exelon, US Navy, NASA, ExxonMobil



### Upstream Operations

AI can help upstream operators estimate the potential value of reserves, considering the cost of acquisition, production, transportation, and more. It can recommend whether it's better to explore and develop further or walk away, either saving or creating investment value.

**Customers:** ExxonMobil, Exelon, Suncor Energy, Encana



### AI-Driven Loyalty

Mosaic helps retail energy operations create better customer experiences through the application of AI & ML. Mosaic has run custom A/B tests for gas station operators that inform marketing decisions and increase the volume of goods sold.

**Customers:** Levi's, Citgo, Suburban Propane, Spire Energy, Atmos Energy