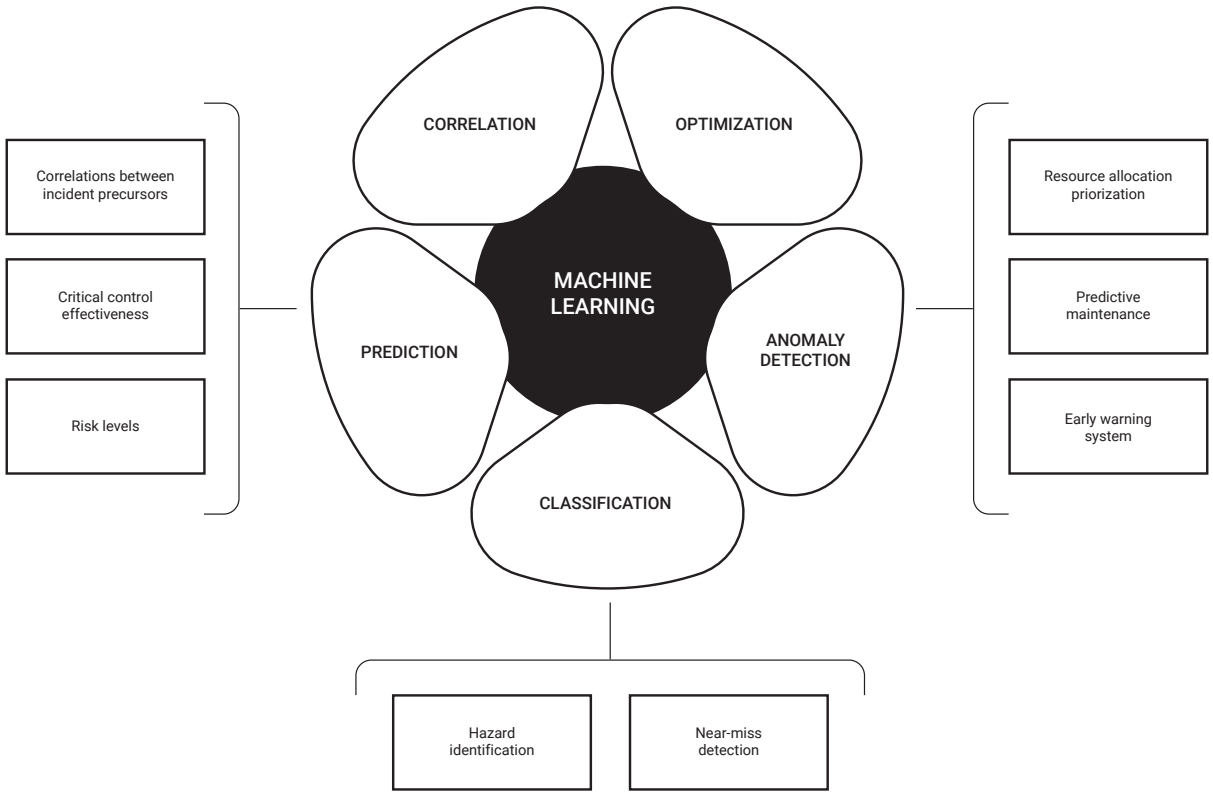
WHAT IS MACHINE LEARNING (ML), AND HOW DO WE USE IT?

USING MACHINE LEARNING TO PREDICT AND PRIORITIZE RISK

Machine Learning (ML) is a subfield of AI that involves developing algorithms to make predictions or decisions based on data without being explicitly programmed. The models don't follow strict, rule-based logic, but support supervised and unsupervised learning from data, to identify correlations, patterns, and make predictions. They can analyze large volumes of data and adapt to new information that humans might miss. For example, in Insight Risk Systems, ML models (e.g., decision trees, Bayesian networks) can be trained on historical incident data, maintenance logs, and inspection data to detect and predict patterns that precede incidents. Further, we utilize them to classify and prioritize risks to help safety managers focus on the most critical hazards and allocate resources effectively.



Using our expertise in risk, strategy, and machine learning; decades of operational, regulatory, and research experience in energy, mining, construction, and transportation with serious incidents and fatalities, we:

- Insightfully combine advanced data analytics and machine learning, process safety and risk management methods, and strategy and human factors analysis.
- Leverage data fusion techniques to analyze your existing data from various sources – inspections, incidents, operational performance, employee surveys – and use theory-informed machine learning methods to 'see' missing leading indicators (the weak signals) to help you understand and improve your risk management systems.
- Currently we offer these as a service, but can help automate data cleaning, analysis, data-fusion, and visualization processing pipelines, so that these can be offered as a product and bundled with MS Power BI or ERP software.

To discuss how you can analyse the gaps in your company's risk management system, contact us:
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