Priori Analytica

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Knowledge of the reasoned facts

Company Overview

PrioriAnalytica uses Machine Learning (ML) algorithms and eXplainable Artificial Intelligence (XAI) to build advanced "Operational Analytics" solutions for the Defence, Resources, Energy and Logistics sectors.

Our core competencies are Predictive/Prescriptive Maintenance, Acoustic Signal Analysis and Classification, and Logistics. Several of our solutions have been proven extensively in the Oil & Gas and Energy sectors, and new solutions adapted or developed specifically for application in the Defence Sector.

Our solutions can predict failures up to six weeks in advance, allowing maintenance and remedial action before the faults occur, ensuring asset uptime. By predicting failures, our clients can better manage maintenance cycles and extend the operating life of platforms and equipment, optimising spare parts holdings and realising efficiencies in workforce tasking.

Team: Multiple PhD's, A/Prof, MBA, Veterans.

Recent Activity:

- Awarded Commonwealth contract with the Australian Joint Acoustic Analysis Centre (AJAAC), the Australian Acoustic Intelligence National Authority that analyses and classifies acoustic data.
- PrioriAnalytica USA was incorporated, New office was established in Houston, TX. New R&D base in UK
- Heathgate Resources (General Atomics) proof of concept trial for Vibraite solution in Uranium mining/production.
- Formation of JV with Ascent 'Corrovision' Pty Ltd. PrioriAnalytica 50% shareholder
- Strategic Partnership with Greenroom Robotics to extend GR offerings via augmented AI implementation.
- The US Assistant Deputy Secretary of Defence, Lisa Smith, supported the introduction of Corrovision for the US military.

Customers

Capabilities

Corrosion. 'Corrovision' is a platform and sensor-agnostic tool that uses AI/ML to accurately predict (with high certainty) corrosion issues on platforms based on past maintenance records, environmental conditions, operating environments, and mission profiles. Proven at >90% accuracy during POC trial; Orion P3. ADF.

Vibration. 'VibrAlte" monitors mechanical plants: engines, motors, pumps, bearings, shafts, etc., providing instantaneous identification of fault onset, classification and progression tracked. Accurately predicts (with high certainty) and forecasts progression and timeframe, enabling mitigating actions before failure.
Initially developed via R&D (DIH) contract with the Australian DOD – Navy.

Logistics. Priori has developed logistics optimisation software, saving the oil and gas industry millions of dollars. Recent iterations of the software optimise routings across several thousand sites without requiring high computing power and reduce the distance routed by approximately 40%.

NDT. Priori's software automatically identifies and classifies potential defects using analyst-guided Machine Learning Algorithms. The analysis is conducted at approximately 5 x manual inspection/analysis rate.

Power Ensures revenue via reducing production loss/deferment due to shut-in of wells due to power issues. The system provides monitoring and advance prediction of disruptive events related to Power systems, Solar, Controller, and Battery performance—up to 6 weeks lead time.

Acoustics. Priori can classify and triage acoustic data using deep learning and generative AI with minimal processing power and energy requirements to improve situational awareness and accelerate decision-making, enabling the deployment of advanced capabilities.

EW. The techniques proven with acoustic signals can be applied to various other waveforms.

Partners